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POSTAL CAR LIGHTING



Postal Car Lighting

1924

Conduit, Wiring and Fixture Installations

Conforming to
Post-Office Department
Specifications



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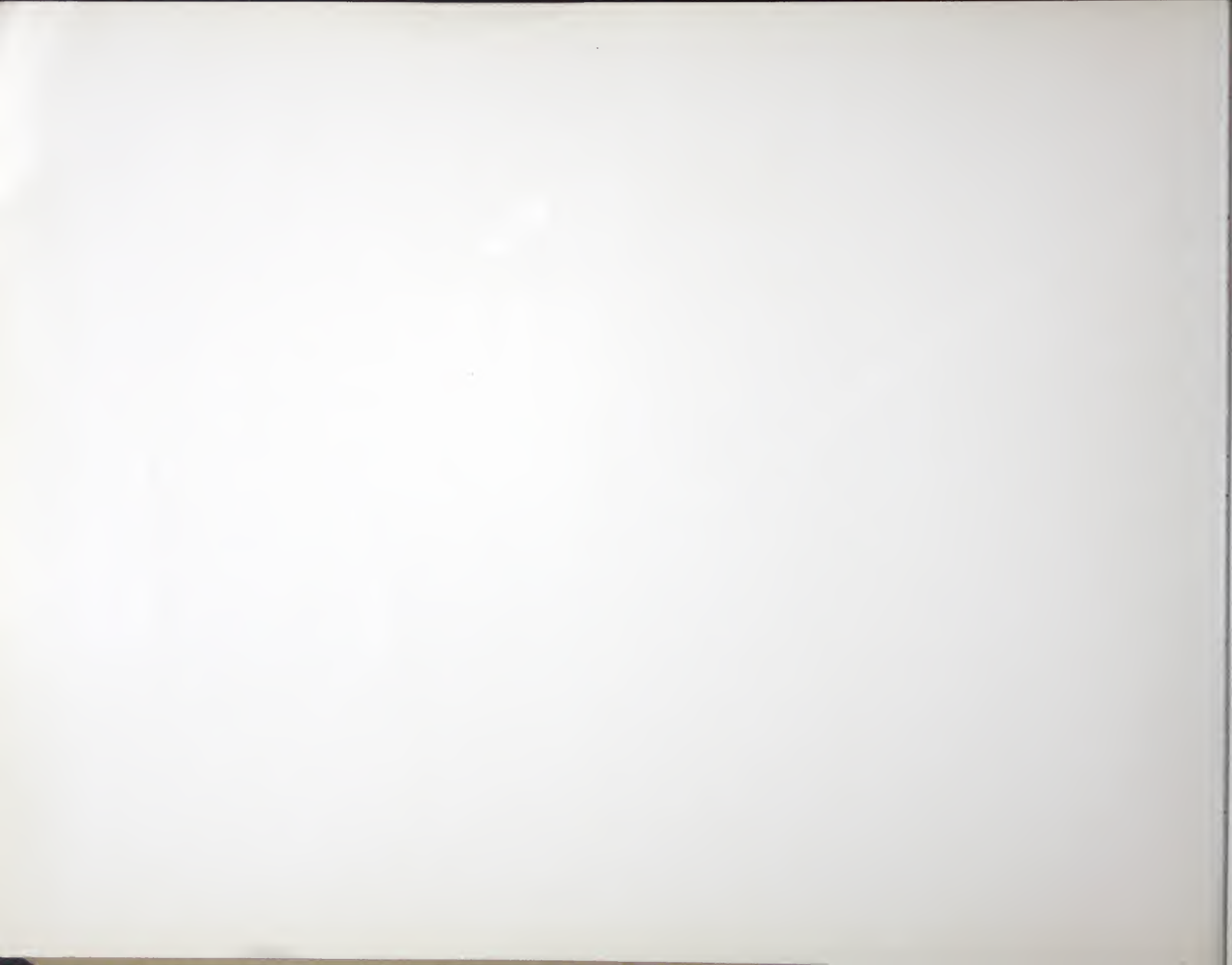
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Postal Car Lighting

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Postal Car Lighting

INTRODUCTORY

THE U. S. Post-Office Department has issued specifications to govern railways regarding the lighting of postal cars. These specifications are explicit regarding illumination values required in different parts of a standard postal car, but selection of means for providing the illumination values is left to the discretion of railways.

Previous issues of "Postal Car Lighting", published by this company have proved to be very useful to Railways and Car Builders. Recommendations contained in previous issues have been followed and have resulted in providing illumination always satisfactory to the Railway Post-Office Department. Consequently, this revised and improved issue assumes an obligation—it must continue to be reliable authority on "Postal Car Lighting".

The purpose of this book is to give a clear understanding of Railway Postal

Car Lighting requirements and to give complete information for satisfying such requirements. It is the purpose of information contained in this book to interpret the Post-office Department's specifications as well as to give the railways the advantage of knowledge and experience obtained regarding best spacing of lighting units, most efficient lamps and reflectors to be used, and the other important features of suitable and economical lighting installations for Railway Postal Cars.

The Safety Car Heating & Lighting Company was actively engaged in tests from which the Government obtained its knowledge of what was required to satisfactorily illuminate postal cars, furnishing lighting fixtures and engineers to assist in the conduct of the test. Information given in this pamphlet is, therefore, reliable and the result of first hand knowledge.

POST-OFFICE DEPARTMENT SPECIFICATIONS

PARTICULAR attention should be directed to certain features of the Post-Office Department specifications as printed verbatim on pages 7 and 9 relating to lighting of Railway Postal Cars and Apartments.

The Post-Office Department will not specifically approve any particular arrangement of lighting fixtures which may be submitted to them. The Railway Post-Office Department is concerned only with illumination results. Means of obtaining these results must be determined by the railways. Certain definite requirements as stated in the specifications,—such as mounting heights of lighting source, screening angles, material of reflectors and type of lamps which must be used,—are given because they are part of illumination results. Glare and shadows, resulting from improper screening angle or improper mounting

height interfere with proper illumination.

It will be noted that two values of illumination are given. One value is the initial requirement or illumination expected from new equipment. The other value is the service requirement based on the amount of illumination required under working conditions. In order to safeguard the maintenance of service values, initial values have been specified. Service values allow for a depreciation of 40% from initial values. If certain types of reflectors are used the illumination values may be 20% less than those given in the specifications.

Fixtures installed in accordance with layouts given in this book will satisfactorily meet the requirements of these specifications.

Post Office Department

SPECIFICATION FOR THE CONSTRUCTION OF STEEL FULL AND APARTMENT RAILROAD POST OFFICE CARS

(Approved Mar. 28, 1912. Revised to March 17, 1915, and further revised to Feb. 2, 1920.)

Section 25—LIGHTING

(a) Lighting of postal cars primarily to be with electricity or gas, where feasible; mantles to be used on gas lights where practicable; provision shall be made for emergency lighting as hereinafter specified. Fixtures, wiring, battery boxes and their equipment, gas piping, and all other accessories in connection with the lighting system shall be railway company's standard practice. Each electrically lighted car equipped for axle generator or head-end system of lighting shall be equipped with storage battery of sufficient capacity to furnish for 12 hours the intensity of illumination specified hereinafter. Each car using gas or straight storage electricity as the primary system of lighting shall be equipped with storage capacity sufficient to furnish light for 36 hours at the intensity of the illumination specified hereinafter.

CONSTRUCTION

Lights are to be located by the railway companies or car builders to produce results called for under the specifications. The Railway Mail Service will not suggest or recommend location of lights. This applies to new or changed installation where the specifications apply.

(b) *Location of light units.*—Body of car. The light units for illuminating the bag-rack and storage portions of the car shall be located on the center line of the car. Direct lighting units in the bag-rack section shall be located at such uniform height that the shadow of the paper boxes is not cast on any bag-rack label, nor higher than approximately 3 inches above the back rod of rack. In no case shall any light unit (except oil lamps, the lowest point of which may be 6 feet 9 inches from the floor) be mounted at a height of less than 7 feet measured from the floor to the lowest point of the light unit. Spacing between adjacent units in the bag-rack portion of the car shall not exceed 8 feet 6 inches in case of any direct system of lighting, nor 14 feet in case of any indirect system.

(c) *Letter cases.*—Light units for illumination of the letter cases shall be mounted at a uniform height from the floor but not lower than the units in the bag-rack section, and as far from front of the face of the letter case as possible without the body of the distributor throwing any shadow on his work. In standard construction the above distance is 20 inches. Where the car construction does not permit the above distance, a lesser distance, but not less than 16 inches, may be employed. Separation between adjacent letter-case units shall be such as to provide an illumination intensity at all points within the requirements hereinafter specified.

(d) If an indirect lighting system be employed, the provisions of the above paragraph will be waived. In such case, the only requirements imposed for location of units at letter cases are those involved in providing for sufficient vertical and horizontal illumination intensities to meet the provisions of these specifications as hereinafter stated, all units in the car burning. For the purpose of these specifications, an indirect system is here defined as any system in which at least 85 per cent of the horizontal illumination on the 46-inch plane of utilization is received, either directly or indirectly, by reflection of the light from the deck of the car.

(e) *Special features of light units.*—In the case of incandescent electric or gas lamps, the design of light unit, except letter-case units, shall be such that no portion of the bare lamp filament or the bare mantle is visible to the eye when the unit is observed at an angle of 70 degrees or greater from the nadir. (In general, light units are preferred which emit no light or only a small amount of light between the angles of 50 degrees and 100 degrees from the nadir.) (If Mazda C type lamps are used, they must have frosted or enameled bowls.)

(f) The control of the lights in the postal apartment shall be in that apartment and independent of any other lights in the car and the letter-case units shall be controlled independently of any other light units in the postal apartment. Knife and snap switches only shall be placed in mail apartment; all other mechanism to be placed in adjoining apartment.

(g) *Initial illumination values.*—All horizontal illumination values shall be taken on plane 46 inches above floor line. Vertical illumination values shall be taken on the vertical plane on the face of letter cases as specified below. New lighting installations shall be such as to give initial illumination values within the following limits:

Location.	Minimum, F. C.	Maximum, F. C.
Bag-rack portion:		
Center of car, horizontal	4.70	10.00
Mouth of bags, illumination measured 18 inches from side of car, horizontal	2.50	10.00
Letter cases:		
Over table, horizontal	4.70	16.00
Face of case, vertical	2.08	16.00
Storage portion, not behind obstructions, horizontal, measured 30 inches from side or end of car.	2.50	10.00

(h) Illumination requirements at letter cases as above specified, shall be entirely fulfilled by letter-case units, other units in the car not burning, but letter-case units may be considered as contributing to the specified illumination values for the body of the car. Lights at letter cases should be located high enough so that shadow of reflector is not cast on any of the label holders.

(i) If globes or reflectors of opal glass, rough crystal glass, prismatic glass, aluminum, or lacquered aluminized metal, and those giving similar results (excluding heavy density opal with glazed reflecting surface, mirrored glass, porcelain enameled metal, and those giving similar results) be employed, the minimum values specified in the above table may be reduced 20 per cent and the maximum values increased 20 per cent.

(j) Above illumination values are based on an allowance of 40 per cent for depreciation in service. Less efficient maintenance must be compensated for by increased initial installation.

(k) If an indirect lighting system be employed, the minimum and maximum values in the above table may be respectively decreased and increased 40 per cent in the bag-rack and storage portions of the car and 25 per cent at the letter-case locations specified in above table.

(l) *Emergency lighting.*—An emergency lighting system consisting of candle lamps will be required on all cars lighted primarily by electricity or gas. A more adequate system of emergency lighting as defined hereinafter, may be required. (See floor plans for location of candle lamp holders.) A candle lamp should be furnished for each holder. Boxes to contain candle lamps when not in service should be located at some convenient and acceptable point in the car. In 30 and 15 foot apartments, locate box over letter case on partition. Candles melting only at relatively high temperatures, 120 degrees or more, shall be used, such as the "Argand-Stearine" or equivalent.

(m) *Electric switches.*—In apartment cars locker containing knife and snap switches controlling current and lights should be located on end of paper boxes when same will not project into doorway lower than 5 feet 8 inches above floor line. Where this would occur, locker should be located as high as possible on the bulkhead next to hopper, on hopper side.



ILLUMINATION VALUES

DIAGRAMS printed in this book show proper location of lighting fixtures to give initial illumination values required by the Post-Office Department specifications. These lighting fixture layouts include the three acceptable sizes of electric lamps and the Pintsch gas mantle. Electric lamps suitable for postal car lighting are as follows:

225-275 lumens—25 watt—S-17—type "B"
 500-600 lumens—50 watt—S-19—type "B"
 500-600 lumens—50 watt—G-30—type "B"
 700-800 lumens—50 watt—PS-20—type "C"

The lumen values indicate rating of total light output of the various lamps. Since the total light output of the lamp determines the amount of illumination available the lumen value avoids confusion which might result from using wattage rating.

With these lighting layouts, used in conjunction with the tables showing proper reflectors for various locations and proper types of fixtures to secure proper lamp positions, the selection of proper lighting fixture installations will not be difficult.

REFLECTORS



ALUKALI REFLECTOR
 No. 51260
 for Electric Lighting—Bag Rack Locations



ALUKALI REFLECTOR
 No. 51270
 for Electric Lighting—Letter Case Locations



ALUKALI REFLECTOR
 No. 51240
 for Electric Lighting—Bag Rack Locations



OPAL GLASS REFLECTOR
 No. 8058
 for Electric Lighting—Bag Rack or Storage Locations



ALUKALI REFLECTOR UNIT
 No. 51250
 for Pintsch Gas—Bag Rack Locations



ALUKALI REFLECTOR UNIT
 No. 51252
 for Pintsch Gas—Letter Case Locations



ALUKALI REFLECTOR UNIT
 No. 52048
 for Pintsch Gas—Storage Locations



ENAMELED REFLECTOR UNIT
 No. 19295
 for Electric Lighting—Storage Locations

THE selection of proper reflectors is the most important factor in proper illumination of Railroad Postal Cars or Apartments, assuming of course that proper amount of light is supplied by the lamps.

Each reflector must be correctly shaped to give the proper distribution of light. The reflecting surface must be of a character to prevent glare and at the same time it must have a high coefficient of reflection with minimum deterioration in service and with a surface easily cleaned.

To fulfill all these conditions, The Safety Car Heating & Lighting Company has developed a special reflector for Postal Car Lighting. This is the "ALUKALI" reflector. It is made in six sizes or shapes; three for electric lighting and three for Pintsch gas lighting.

"ALUKALI" reflectors are made of heavy sheet aluminum;—not steel covered with aluminum paint. The reflecting surface is specially treated to give it an initial efficiency higher than other types of reflectors and with less service depreciation. When these reflectors become dirty they can be restored to within 10% of their initial efficiency by wiping with a dry cloth;—this is possible due to the fact that there is no oxidation or other chemical change in the metal of the reflector or at the reflecting surface. Thorough washing will restore "ALUKALI" reflectors to practically their initial efficiency.

The surface of "ALUKALI" reflectors is thoroughly diffusing so that no glare can result from their use.

The conditions as mentioned in Post-Office Department specifications



(Paragraph "i") are fully met by "ALUKALI" reflectors which entitle them to be used with 20% lower illumination value than that given in the illumination tables.

Two shapes of reflectors are required to properly light postal cars whether the illuminant is electric or Pintsch gas. A reflector with concentrated light distribution is required for the letter cases. This type of distribution is provided by "ALUKALI" reflector No. 51270 when electric lamps are used and No. 51252 when the Pintsch gas mantle is used. The bag rack portion of the car requires reflectors giving a broader light distribution. This requirement is satisfactorily provided by "ALUKALI" reflector No. 51260 or No. 51240 with electric lamps and No. 51250 with Pintsch gas mantle.

"ALUKALI" reflector No. 51240 can only be used with 25-watt, S-17-type

"B" lamp. This same size lamp can be used with reflector No. 51260 and for convenience in carrying only one type of "ALUKALI" reflector suitable for bag rack lighting we would recommend wherever possible that railroads discontinue using the No. 51240.

When glass reflectors are preferred to metal reflectors for bag-rack locations, medium density opal glass reflector No. 8058 can be used in locations wherever "Alukali" reflectors No. 51260 are recommended. Exhaustive tests made under the direction of the U. S. Post-Office Department developed that railway mail clerks can perform their exacting duties better with localized illumination given by "Alukali" reflectors, than with the evenly distributed general illumination given by glass reflectors.

Reflectors for storage locations and baggage apartments are described in following section under "Fixtures".

FIXTURES

FIXTURES should be mounted so that the distance from floor to center of electric filament or gas mantle is 7 feet 7 inches, for lamps in the bag rack section, and 8 feet for lamps in the letter case section. These mounting heights have been found to best prevent shadows from paper boxes falling on bag rack labels and to insure proper lighting of top labels on letter cases with no shadows on the distributing table.

Post-Office Department circular letter of October 3, 1923, as quoted on page 9 requires that the end lamp (or lamps), in postal cars and apartments be raised to provide a clearance of not less than 8 feet 6 inches from floor of car. This is to provide maximum clearance under the fixture for storage of mail sacks. For electric lighting in these locations we recommend a short fixture with white enameled steel reflector unit No. 19295. This number includes reflector and supporting plate, but no junction box. (See page 29.) When Pintch Gas Mantles are used a special "ALUKALI" reflector No. 52048 is recommended.

The lighting layouts show fixture No. 19136 over doors. These fixtures, when installed as shown, are designed to light the doorway of the car and also the floor of high platforms and trucks when loading or unloading mail. The Post Office Department specifications do not call for these door lights, but their use is approved.

The specifications call for a system of emergency lighting consisting of candles held in suitable holders. The lighting fixture layouts show the proper locations for these auxiliary lights. A bracket should be installed at indicated



COMPLETE ELECTRIC FIXTURE
AND JUNCTION BOX
for Bag Rack Locations



COMPLETE ELECTRIC FIXTURE
AND JUNCTION BOX
for Letter Case Locations



locations to which the candle holder can be attached when necessary. (See Paragraph "L" of specifications.) The Safety Car Heating & Lighting Company's candle holder No. 282 and Candle No. 298 conform to the specifications and should be used.

The present floor plans of 60 foot full postal cars and 30 foot apartments are so arranged that letter case equipments may be enlarged by removing one or more of the bag rack sections and extending the letter case sections. The position of additional letter case lights when this is done is indicated on the lighting fixture layouts. The Post-Office Department requests that blocking for the installation of these fixtures be provided in all cars when built.

The Lighting Layouts for mail apartments also show the recommended locations of lighting fixtures in the baggage compartment with which the postal apartment is generally combined. This baggage apartment is not included in the Post-Office Department specifications, but we would recommend that fixture No. 19211 with white enamel steel reflector be used to give the best distribution of light required in baggage car. Uniform lighting on a vertical plane up to the height of the car lading, as well as adequate illumination on the horizontal plane is provided by this type of reflector.

Note—The same reflector is used for both storage and baggage locations, but the junction box and reflector supporting plate of storage fixture is made larger than baggage apartment to accommodate larger diameter conduit and increased number of circuit wires.

It should be noted that electric lighting fixtures recommended in this book differ somewhat from the lighting fixtures recommended in previous issues of "Postal Car Lighting". Each fixture consists of two parts—the fixture proper and the junction box. A complete table of directions for ordering these fixtures will be found under the illustrations on pages 25, 27 and 29.

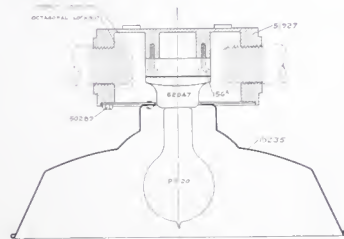
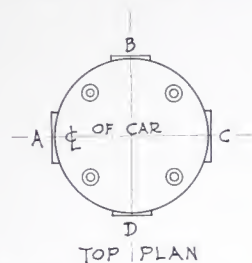
All fixtures, both electric and gas, as recommended in this book, are made especially for postal car lighting service. They are of rugged construction and easily accessible for any inspection that may be necessary.

The well-known "SAFETY" shadeholder with its flexible metal fingers and positive lock now used by railroads on a great majority of electric lighting fixtures in railway passenger cars, is employed on the electric fixtures shown in this book.

In all electric fixtures, convenient means are provided for changing the position of the lamp in relation to the reflector in the event that a different size or type of lamp is required from that originally installed in the car. In order to properly distribute light in the car and to have the reflector screen the lamp filament properly, as called for in paragraph "e" of the specifications, the proper



No. 19136



JUNCTION BOX CHARACTERISTICS

Catalogue No.	Tapping for Conduit			
	A	B	C	D
Outlet Locations				
52800 A.....	1"			
52800 B.....	1"		1"	
52800 C.....	1"	1"	1"	1"
52800 E.....	3"		3"	
52800 F.....	3"		3"	
52800 G.....	3"		3"	3"

For convenience in ordering, Fixture No. 19235 and Junction Box No. 52800 have been given Catalogue No. 19211, and take same suffix as corresponding Junction Box. Thus: Fixture No. 19235 with Junction Box No. 52800A is No. 19211A.

Baggage Fixture and Junction Box



Electric Lighting Fixture and Junction Box for Storage Locations

When used in Baggage locations this fixture requires smaller Junction Box and bears different catalog number, as shown in table on this page.



CANDLE BRACKET COMPLETE
No. 282
includes Chimney No. 234
Wall Bracket No. 52546
Flame Spreader No. 8135
and Candle No. 298



relations between lamp filament and reflector must be maintained. As the distance between the lamp base and the center of the filament is different for different type of electric lamps this means that each type of lamp requires a different relative position of the socket and reflector.

This condition is provided for by the use of socket supports of different lengths. A new socket support can be provided at a very small cost and is easily installed in the lighting fixture when change in lamps has been decided upon.

The $1\frac{1}{2}$ inch pipe which makes up the stem of electric fixtures, is cut the right length to give proper distance from floor of car to the light source. Information should be sent with the fixture order so as to give us the car dimensions and enable us to determine the proper length of this $1\frac{1}{2}$ inch pipe.

JUNCTION BOXES

IT is now conceded that the wiring of postal cars or apartment cars should be through conduits exposed on the ceiling of the cars. With this arrangement the use of a junction box at each lighting fixture location provides the most practical arrangement. The base of each electric lighting fixture as shown in this book is made in the form of a junction box to facilitate drawing wire through conduit and branching to the side lamps. These junction boxes or fixture bases can be furnished for any size conduit required and for as many tappings as may be required to suit the fixture for the particular location.

The reference to the tables and instructions printed on pages with fixture sections will readily explain how to properly order junction boxes. Each junction box is provided with a cut-out receptacle No. 52671. No soldering or cutting of circuit wires is necessary—the circuit wires are run through the recep-

All postal car electric lighting fixtures are made to attach directly to the bottom of junction boxes. Electric connection between the circuit wires and the fixture wires is made through receptacle No. 52671 located in the junction box. This avoids any necessity of soldering and taping connections and makes the fixture readily detachable at any time if it is necessary to inspect the wiring.

The electric fixture used in the storage end of mail cars and also in the baggage compartment has the lamp socket mounted in the junction box so as to minimize the length of the fixture as much as possible. The lamp receptacle No. 52047 combines the socket and connection block. The circuit wiring passes through the base of this receptacle and the connections are made without cutting or splicing. Ample room is provided in the base or junction box for other circuit wires to pass around the receptacle.

tacle No. 52671. The lighting fixture is easily connected or disconnected from the circuit by simply turning the bottom of the receptacle;—sufficient slack wire being allowed so that the fixture can be lowered a suitable distance with respect to the junction box so as to permit access to the receptacle.

Ample room is also provided in the fixture junction boxes for wires of other circuits to pass around the cut-out receptacles.

A list of material to properly equip the car will be found on page opposite to each page of diagrams and layouts.

Complete instructions for proper ordering of lighting fixtures and junction boxes will be found on pages showing sectional diagrams of fixtures.

CONDUIT AND JUNCTION BOX DIAGRAM

PROPER size of conduit to accommodate wires for the required number of circuits and the correct junction boxes for each standard lighting installation are shown on the conduit and junction box diagrams. It will be noted that these diagrams are a new feature in this book, not being shown in previous issues of "Postal Car Lighting".

If modifications of the wiring and conduit diagrams as shown in this book are contemplated by car builders or railways, the proposed diagram should be submitted with purchase orders for lighting fixtures and junction boxes to assist in proper execution of such orders.



WIRING DIAGRAMS

WIRING diagrams, showing correct arrangement of circuits for all classes of cars, will also be found very helpful and will add to the serviceability of this issue over previous issues of "Postal Car Lighting".

The Post-Office Department specifications, paragraph "f" and "m" exact certain requirements which are covered by these diagrams. It will also be noted in the first paragraph of Post-Office Department letter dated October 3rd, 1923, and quoted on page 9 limits the depth of the switch box in apartments to $4\frac{1}{2}$ inches because a deeper box encroaches too much on the space available. Study of the diagrams will show that letter case lights are on circuits separate from other lights in the car. In full postal cars a switch should be installed at a convenient location near the letter cases for local control of the letter case lights; this switch being in addition to the letter case light control switch at the switchboard. Center lights in these cars are divided into two circuits for greater flexibility. Door lights are each provided with a separate switch.

Location of electric lighting equipment and switchboards for full postal cars should be as shown on the car plan, pages 39 and 41.

Control of the light in mail apartment of combined mail and baggage cars must be totally independent of the rest of the car, but the apparatus, such as regulators, must not be located in the mail apartment. The control of the mail apartment light is accomplished by the use of a separate switchboard No. 25003 (see page 75) in the mail apartment and with switchboard No. 21820 (see page 75) to control the light in the baggage or passenger portion of the car. With this arrangement, the mail apartment lights are independent of the switchboard in the other end of the cars, but proper connections are made so that when no lights are being used in either end of the car there is no discharge from the storage battery. The conduit shown in the conduit diagrams for combined cars is made of sufficient size to accommodate wires necessary for connecting two switchboards as well as the circuit wires.

Switchboards are designed to easily fit inside a box $4\frac{1}{2}$ inches deep as required. Knife switches are used for the circuit switches because it has been found that this switch is more serviceable and is kept in repair easier than other types of switches.

Proper location of the switch box is shown on pages 39 and 41, general car plan.

GAS LIGHTING

THE light source used for gas lighting is the Pintsch incandescent gas mantle No. 3044, having a horizontal candle power of 90, a lumen output of 850 and gas consumption of two cubic feet per hour. The same size mantle is used in all lamps.

As previously stated "ALUKALI" reflectors are used for the letter case and bag rack gas lamps. It should be noted that reflector unit No. 51250 used with the center lamps and No. 51252 used with the letter case lamps include the "ALUKALI" metal reflector and clear glass bowl.

All gas lighting fixtures used are adaptations of standard Pintsch mantle lamps to fit the particular location in the car in which they are used.

Lamp No. 3520 is used in the bag rack section. This lamp is supported on four arms at the correct height above the floor.

Lamp No. 8520 used at the letter case location is supported by two vertical arms to the upper deck with a third arm to attach to the deck rail.



PINTSCH GAS MANTLE FIXTURE
No. 8511
with Alukali Reflector Unit No. 52048
used in Storage and Baggage Locations



PINTSCH INCANDESCENT
GAS MANTLE
No. 3044

Lamp No. 8511 is used in the storage end of the car and is equipped with "ALUKALI" reflector unit No. 52048. This short deck type of lamp is necessary in these locations to obtain the necessary clearance above the floor.

Recommended Pintsch gas lighting arrangements for the baggage end of combination cars is shown in the diagrams, using lamp No. 8511 and reflector No. 52048. The same as used in the storage section of the postal apartment.

It will be noted that diagrams are included in this issue of "Postal Car Lighting", showing gas piping arrangement. Standard Pintsch fittings are used throughout. The postal apartments of combination cars have a main cock No. 25-C controlling lamps in the mail apartment independently of the lamps in other parts of the car.



PINTSCH GAS MANTLE FIXTURE
No. 8520
with Alukali Reflector Unit No. 51252
for Letter Case Locations



PINTSCH GAS MANTLE FIXTURE
No. 3520
with Alukali Reflector Unit No. 51250
for Bag Rack Locations



RESERVE LIGHTING CAPACITY

THE Post-Office Department specifications, paragraph "a" call for storage battery capacity sufficient to light the car for twelve hours when an axle lighting electric generator system is used, and storage capacity for thirty-six hours lighting when gas or storage batteries only are used.

Capacity of batteries or gas tanks for various full postal cars and apartment cars will be found in the following tables.

TABLE OF STORAGE BATTERY CAPACITY FOR POSTAL CARS

Car or Apartment	Lamp	Battery ampere hours
70 foot.....	50 watt C	300
70 foot.....	50 watt B	350
70 foot.....	25 watt B	300
60 foot.....	50 watt C	300
60 foot.....	50 watt B	300
60 foot.....	25 watt B	300
30 foot.....	50 watt C	200
30 foot.....	50 watt B	225
30 foot.....	25 watt B	200
15 foot.....	50 watt C	200
15 foot.....	50 watt B	225
15 foot.....	25 watt B	200

TABLE OF STORAGE CAPACITY FOR POSTAL CARS
PINTSCH GAS TANKS

Car or Apartment	Number of holders	
	No. 250 (580)	No. 249 (530)
70 foot.....	4	5
60 foot.....	3	4
30 foot.....	2	3
15 foot.....	2	3

This specification takes no account of the lighting for baggage apartment of combination cars. In fixing the reserve capacity for these cars, allowance has been made for the capacity in the batteries or gas tanks to light the postal apartment for the whole period required and the baggage compartment for half the required period. This is the practice generally adopted.

Figures are not given in connection with straight storage electric lighting as this system is not suited to the requirements of postal car lighting.

LIGHTING EQUIPMENTS

LIGHTING equipments for postal cars must be reliable because lighting failures are not tolerated in this service; see paragraphs "r", "s" and "d" and "u" of Post-Office Specifications. In addition to the fixtures described in this book, The Safety Car Heating & Lighting Company is prepared to furnish the lighting equipments. This equipment will meet the requirements of postal car lighting and has sufficient capacity and reliability to keep the illumination well above the service values given in Paragraph "n" if the fixture installation is in accordance with the recommendations given in this book.

Pintsch gas has always been a reliable means of lighting postal cars. The

simplicity of equipment together with the adequate system of supply stations has given Pintsch gas a finer service record in the Railway Post-Office Department.

The Safety Car Heating & Lighting Company electric axle lighting equipment with the "PUTNAM" electric storage battery, manufactured by this company, offers a complete equipment for electric lighting with the proper regulation to insure correct lamp voltage and with ample capacity for all requirements. Books describing and illustrating electric lighting equipment and "PUTNAM" batteries will be gladly furnished on request.



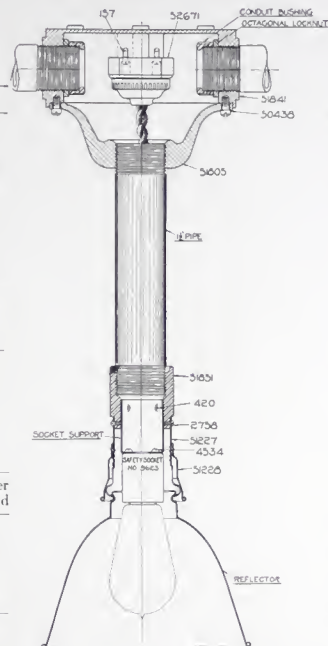
COMPLETE ELECTRIC FIXTURE AND JUNCTION BOX FOR BAG RACK LOCATIONS

JUNCTION BOX CHARACTERISTICS

Catalogue No.	Tapping for Conduit			
Outlet locations	1	2	3	4
51803-A	1 1/4"	—	1 1/4"	—
51803-B	1 1/4"	1 1/2"	1 1/4"	1 1/2"
51803-C	1 1/4"	1 1/2"	1"	1 1/2"
51803-D	1"	—	1"	—
51803-E	1"	—	—	—
51803-F	3/4"	—	3/4"	—
51803-G	1"	1 1/2"	1"	1 1/2"
51803-H	3/4"	3/4"	3/4"	3/4"
51803-I	1 1/4"	—	1"	—

PARTS FOR COMPLETE JUNCTION BOX

Catalogue No.	Description	Number Required
51841	Junction Box	1
52671	Receptacle	1
50438	1/4"-20 Screw	4
157	Screw	2



PARTS FOR COMPLETE FIXTURE

Catalogue No.	Description	Number Required
51227	Shadeholder Clamp	1
51228	Cap Nut	1
51851	Shadeholder Support	1
2758	Screw	4
420	Screw	4
	Socket Support	1
	Reflector	1
51805	Spider	1
	1 1/2" Pipe	—
4334	Screw	2

FIXTURE CHARACTERISTICS

Catalogue No.	Lamp Position	Bulb	Reflector	Socket Support	Stand Position
19205-B	1"	P. S. 20	51260	9464	4
19205-C	1/2"	S-19	51260	9465	2
19205-D	0	S-17	51260	9466	0
19205-E	1 1/8"	G-30	51260	9463	—

INSTRUCTIONS FOR ORDERING ELECTRIC LIGHTING FIXTURES AND JUNCTION BOXES

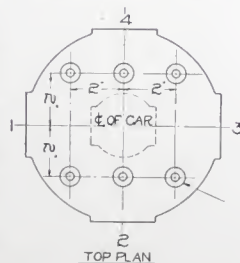
1. Give type and wattage of lamp to be used.
2. Refer to car plan which shows lighting fixture layout for type of car or apartment required and for particular type and wattage of lamp to be used.

A "List of Fixtures and Junction Boxes" for this particular requirement will be found on page opposite to each fixture layout.

When fixtures and junction boxes are required for old cars or apartments, the location of skylights, letter cases, doors, etc., should be indicated on Form No. 2441. These printed forms will be sent to railroads and car builders on request.

3. Order must specify both fixtures and junction boxes because catalog number of fixture does not include junction box.

4. Be sure to specify correct suffix letters for fixtures and junction boxes.



5. Template or curvature radius of car ceiling, with height of ceiling at center of car and inside width of car must be furnished with order. Printed forms No. 2441, illustrated on page 37, indicate exactly what dimensions are required. These forms, sent to railroads and car builders on request, can be marked with necessary information and attached to order.

6. For old cars or apartments not built in accordance with standard plans and specifications, the order should specify depth of letter cases, depth of paper boxes and height from floor to bottom of paper box. See form No. 2441, page 37.

7. Specify color finish required for fixtures and junction boxes.



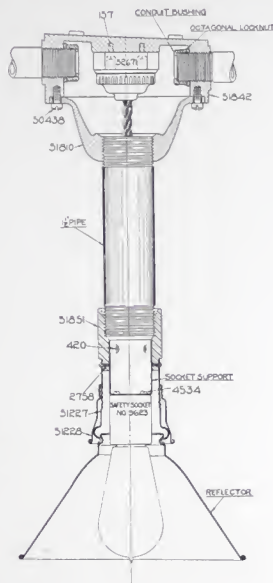
COMPLETE ELECTRIC FIXTURE AND JUNCTION BOX FOR LETTER CASE LOCATIONS

JUNCTION BOX CHARACTERISTICS

Catalogue No.	Tapping for Conduit			
Outlet Locations	1	2	3	4
51808-A	—	—	1/2"	—
51808-B	—	1/2"	—	—
51808-C	—	—	—	1/2"
51808-D	—	1/2"	1/2"	—
51808-E	1/2"	—	—	1/2"
51808-F	—	1/2"	—	1/2"
51808-G	—	1/2"	1/2"	1/2"
51808-H	1/2"	1/2"	1/2"	—
51808-I	1/2"	—	1/2"	1/2"
51808-J	1/2"	1/2"	—	1/2"
51808-K	1/2"	—	—	—
51808-L	1/2"	1/2"	—	—
51808-M	3/4"	—	—	—
51808-N	—	3/4"	—	3/4"
51808-P	1/2"	—	1/2"	—

PARTS FOR COMPLETE JUNCTION BOX

Catalogue No.	Description	Number Required
51842	Junction Box	1
50438	1/4"-20 Screw	4
52671	Receptacle	1
7274	Screw	2
157	Screw	2



PARTS FOR COMPLETE FIXTURE

Catalogue No.	Description	Number Required
51227	Shadeholder Clamp	1
51228	Cap Nut	1
51831	Shadeholder Support	1
2758	Screw	4
420	Screw	4
	Socket Support { See Table }	1
51810	Reflector	1
	Spider	1
	1 1/2" Pipe	—
4534	Screw	2

FIXTURE CHARACTERISTICS

Catalogue No.	Lamp Position	Bulb	Reflector	Socket Support	Stand Position
19215-B	1"	P.S. 20	51270	9464	4
19215-C	1/2"	S-19	51270	9465	2
19215-D	0	S-17	51270	9466	0
19215-E	1 1/8"	G-30	51270	9463	—

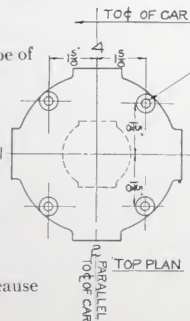
INSTRUCTIONS FOR ORDERING ELECTRIC LIGHTING FIXTURES AND JUNCTION BOXES

1. Give type and wattage of lamp to be used.
2. Refer to car plan which shows lighting fixture layout for type of car or apartment required and for particular type and wattage of lamp to be used.

A "List of Fixtures and Junction Boxes" for this particular requirement will be found on page opposite to each fixture layout.

When fixtures and junction boxes are required for old cars or apartments, the location of skylights, letter cases, doors, etc., should be indicated on Form No. 2441. These printed forms will be sent to railroads and car builders on request.

3. Order must specify both fixtures and junction boxes because catalog number of fixture does not include junction box.



4. Be sure to specify correct suffix letters for fixtures and junction boxes.

5. Template or curvature radius of car ceiling, with height of ceiling at center of car and inside width of car must be furnished with order. Printed forms No. 2441 illustrated on page 37 indicate exactly what dimensions are required. These forms, sent to railroads and car builders on request, can be marked with necessary information and attached to order.

6. For old cars or apartments not built in accordance with standard plans and specifications, the order should specify depth of letter cases, depth of paper boxes and height from floor to bottom of paper box. See form No. 2441, page 37.

7. Specify color finish required for fixtures and junction boxes.



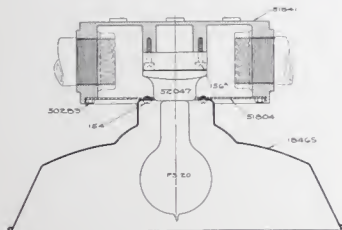
ELECTRIC LIGHTING FIXTURE AND JUNCTION BOX FOR STORAGE LOCATIONS

COMPLETE PARTS FOR JUNCTION BOX

Catalogue No.		
51841	Junction Box.....	1
52047	Receptacle.....	1
156-A	Screw for Receptacle.....	2
50289	Screw for Fixture.....	4

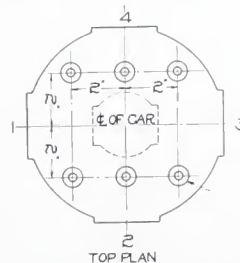
FIXTURE NO. 19295 COMPLETE

Catalogue No.	Description	Number Required
18465	Reflector.....	1
51804	Plate.....	1
154	Screws for Plate.....	4



JUNCTION BOX CHARACTERISTICS

Catalogue No.	Tapping for Conduit			
Outlet locations	1	2	3	4
52803-A	1 1/4"	—	1 1/4"	—
52803-B	1 1/4"	1/2"	1 1/4"	1/2"
52803-C	1 1/4"	1/2"	1"	1/2"
52803-D	1"	—	1"	—
52803-E	1"	—	—	—
52803-F	3/4"	—	3/4"	—
52803-G	1"	1/2"	1"	1/2"
52803-H	3/4"	3/4"	3/4"	3/4"
52803-I	1 1/4"	—	1"	—



INSTRUCTIONS FOR ORDERING ELECTRIC LIGHTING FIXTURES AND JUNCTION BOXES

1. Give type and wattage of lamp to be used.
2. Refer to car plan which shows lighting fixture layout for type of car or apartment required and for particular type and wattage of lamp to be used.

A "List of Fixtures and Junction Boxes" for this particular requirement will be found on page opposite to each fixture layout.

When fixtures and junction boxes are required for old cars or apartments, the location of skylights, letter cases, doors, etc., should be indicated on Form No. 2441. These printed forms will be sent to railroads and car builders on request.

3. Order must specify both fixtures and junction boxes because catalog number of fixture does not include junction box.

4. Be sure to specify correct suffix letters for fixtures and junction boxes.
5. Template or curvature radius of car ceiling, with height of ceiling at center of car and inside width of car must be furnished with order. Printed Forms No. 2441, illustrated on page 37, indicate exactly what dimensions are required. These forms, sent to railroads and car builders on request, can be marked with necessary information and attached to order.
6. For old cars or apartments not built in accordance with standard plans and specifications, the order should specify depth of letter cases, depth of paper boxes and height from floor to bottom of paper box. See Form No. 2441, page 37.
7. Specify color finish required for fixtures and junction boxes.

PINTSCH GAS MANTEL FIXTURE No. 3520 FOR BAG RACK LOCATIONS

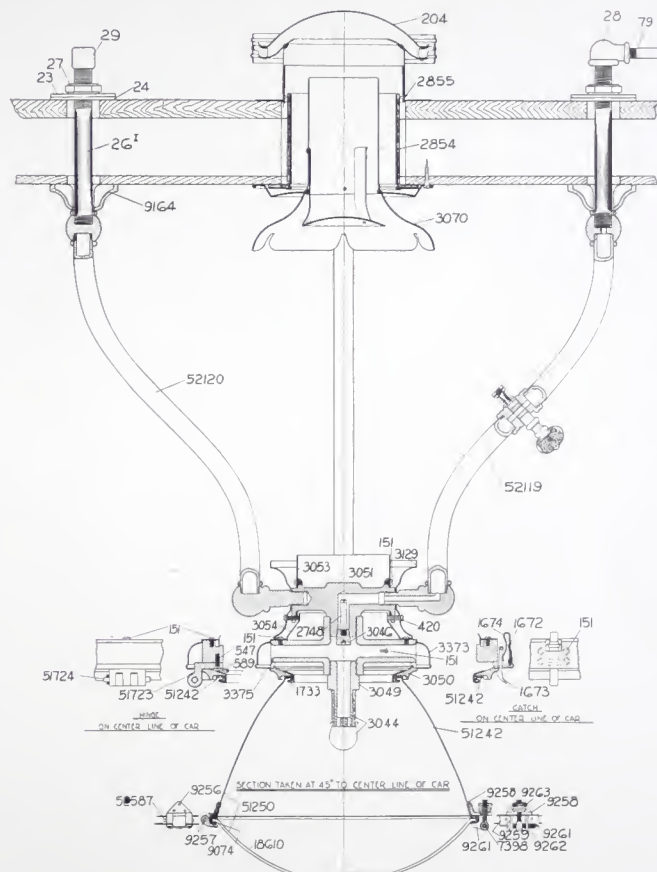
LIST OF PARTS

CAT. NO.

23	Iron washer
24	Rubber washer
26f	3/8 in. W. I. pipe nipple
27	3/8 in. Locknut
28	3/8-in. x 1/8-in. ell
29	3/8-in. cap
79	1/8-in. extra strong pipe
151	Screw for catch, flues, and hinge
204	Ventilator
420	Screw for crown
547	Screw for hinge
589	Screw for reflector
1672	Cover for catch
1673	Catch
1674	Spring for catch
1733	Globe holder ring
2748	Gas strainer
2854	Ceiling thimble
2855	Roof thimble
3044	Mantle
3046	Gas tip
3049	Burner nozzle
3050	Bezel
3051	Spider casting

CAT. NO.

3033	Top flue
3054	Bottom flue
3070	Ventilating bell
3129	Crown
3373	Ornamental apron
3375	Body
7398	Catch screw
9074	Bowl holder
9164	Ceiling plate
9256	Hinge plate
9257	Hinge plate
9258	Catch plate
9259	L. H. catch bracket
9261	R. H. catch bracket
9262	Catch bolt
9263	Thumb nut
51250	Reflector bowl unit
18610	Glass bowl
51242	Reflector
51723	Hinge plate
51724	Hinge pin
52119	Gas arm
52120	Plain arm
52387	Hinge pin for hinge plates Nos. 9256 and 9257



INSTRUCTIONS FOR ORDERING PINTSCH GAS MANTLE FIXTURES

1. Refer to car plan which shows lighting fixture layout for type of car or apartment required and for particular type of Pintsch Gas Mantle Fixture to be used.

A "List of Fixtures" for this particular requirement will be found on page opposite to each fixture layout.

2. Template or curvature radius of car ceiling, with height of ceiling at center of car and inside width of car must be furnished with order. Also furnish thickness of roof and dimensions of deck rail. Printed Forms No. 2441 illustrated on page 37, indicate exactly what dimensions are required.

3. For old cars or apartments not built in accordance with standard plans and specifications, the order should specify depth of letter cases, depth of paper boxes and height from floor to bottom of paper box.

See Form No. 2441, page 37.

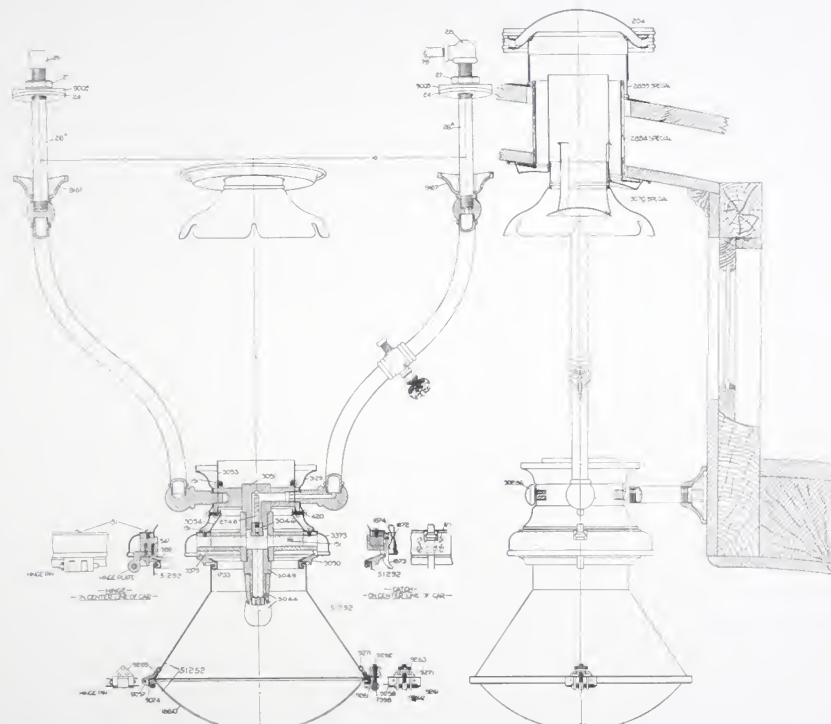
4. Specify color finish required for fixtures.



PINTSCH GAS MANTLE FIXTURE No. 8520 FOR LETTER CASE LOCATIONS

LIST OF PARTS

CAT. NO.		CAT. NO.	
24	Rubber washer	3054	Bottom flue
26a	3/8-in. W. I. pipe nipple	3070	Special ventilating bell
27	3/8-in. Locknut	3129	Crown
28	3/8-in. x 1/2-in. ell	3373	Ornamental apron
29	3/8-in. cap	3375	Body
79	1/2-in. extra strong pipe	7398	Catch screw
151	Screw for catch, flues and hinge	9005	Washer
204	Ventilator	9074	Bowl holder
420	Screw for crown	9167	Ceiling plate
547	Screw for hinge	9257	Hinge plate
589	Screw for reflector	9259	Left hand catch bracket
1672	Cover for catch	9261	Right hand catch bracket
1673	Catch	9262	Catch bolt
1674	Spring for catch	9263	Thumb nut
1733	Globe holder ring	9269	Hinge plate
2748	Gas strainer	9271	Catch plate
2854	Special ceiling thimble	50286	Plug
2855	Special roof thimble		Gas arm
3044	Mantle		Plain arm
3046	Bushing		Side arm
3049	Burner nozzle	51252	Reflector bowl unit
3050	Bezel	18610	Glass bowl
3051	Spider casting	51292	Reflector
3053	Top flue		



INSTRUCTIONS FOR ORDERING PINTSCH GAS MANTLE FIXTURES

1. Refer to car plan which shows lighting fixture layout for type of car or apartment required and for particular type of Pintsch Gas Mantle Fixture to be used.

A "List of Fixtures" for this particular requirement will be found on page opposite to each fixture layout.

2. Template or curvature radius of car ceiling, with height of ceiling at center of car and inside width of car must be furnished with order. Also furnish thickness of roof and dimensions of deck rail. Printed Forms No. 2441, illustrated on page 37, indicate exactly what dimensions are required.

3. For old cars or apartments not built in accordance with standard plans and specifications, the order should specify depth of letter cases, depth of paper boxes and height from floor to bottom of paper box.

See Form No. 2441, page 37.

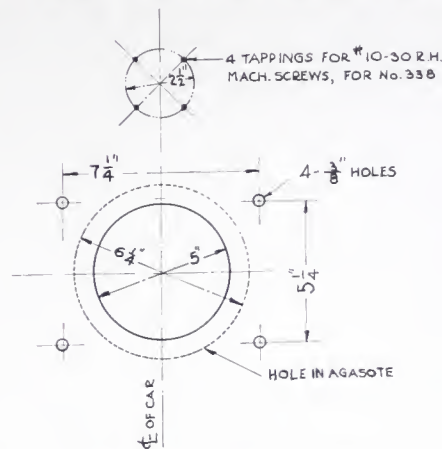
4. Specify color finish required for fixtures.



PINTSCH GAS MANTLE FIXTURE No. 8511 USED IN STORAGE LOCATIONS AND BAGGAGE APARTMENTS

LIST OF PARTS

CAT. NO.		CAT. NO.	
28	$\frac{3}{8}$ in. x $\frac{1}{8}$ in. ell	8286	Catch
76	$\frac{3}{8}$ in. pipe nipple $8\frac{3}{8}$ in. long	8318	Screw for hinge plate
151	No. 8 r. h. brass mach. screw $\frac{1}{4}$ in. long	9074	Spun ring
589	Screws for globe holder ring	9256	Hinge plate for reflector
1733	Globe holder ring	9257	Hinge plate for bowl
2260	Bracket for catch	9258	Catch plate
2748	Gas strainer	9259	L. H. catch bracket
2920	Screw for catch bracket	9261	R. H. catch bracket
3044	Mantle	9262	Catch bolt
3046	Gas tip	9263	Thumb nut
3049	Burner nozzle	9374	Ceiling thimble
3050	Bezel	9382	Hinge plate for bezel
3339	Spring for catch	51238	Body casting
7398	Screws for catch	51239	Flue
8128	Ventilator	52048	Reflector bowl unit
8148	Roof thimble	18610	Glass bowl
		51644	Reflector



INSTRUCTIONS FOR ORDERING PINTSCH GAS MANTLE FIXTURES

1. Refer to car plan which shows lighting fixture layout for type of car or apartment required and for particular type of Pintsch Gas Mantle Fixture to be used.

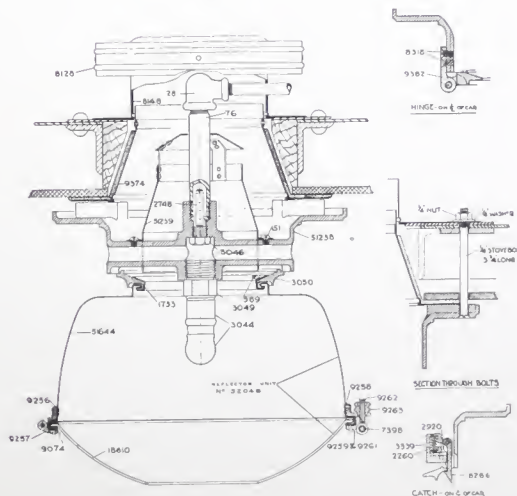
A "List of Fixtures" for this particular requirement will be found on page opposite to each fixture layout.

2. Template or curvature radius of car ceiling, with height of ceiling at center of car and inside width of car must be furnished with order. Also furnish thickness of roof and dimensions of deck rail. Printed Forms No. 2441, illustrated on page 37, indicate exactly what dimensions are required.

3. For old cars or apartments not built in accordance with standard plans and specifications, the order should specify depth of letter cases, depth of paper boxes and height from floor to bottom of paper box.

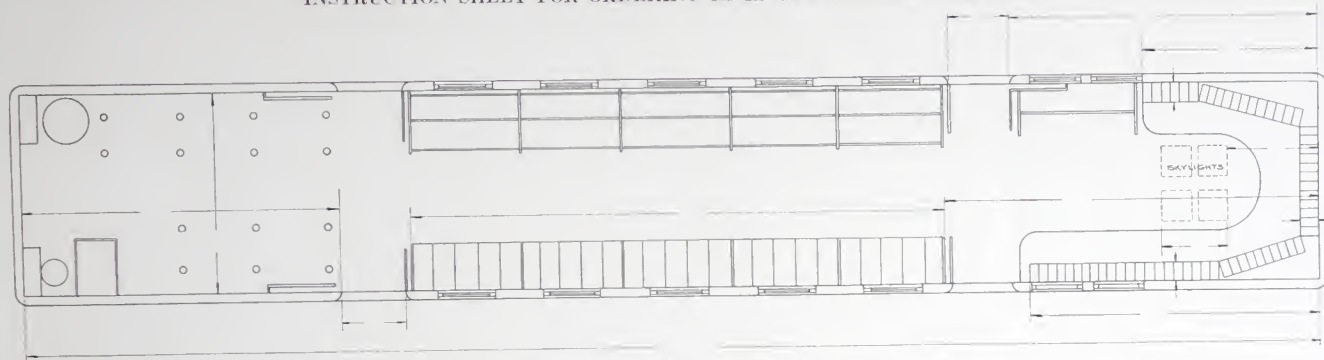
See Form No. 2441, page 37.

4. Specify color finish required for fixtures.

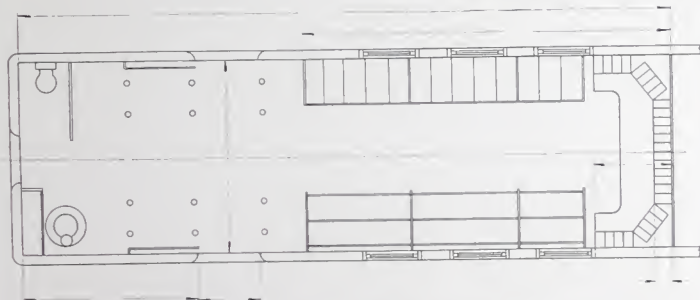




INSTRUCTION SHEET FOR ORDERING MAIL CAR LIGHTING FIXTURES



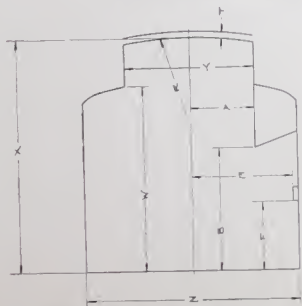
FLOOR PLAN OF OLD STYLE 60 FT. MAIL CAR



FLOOR PLAN OF OLD STYLE 30 FT. MAIL APARTMENT



FLOOR PLAN OF OLD STYLE 15 FT. MAIL APARTMENT



CROSS SECTION OF MAIL CAR

CAUTION: Do not remove this page from book; separate printed sheets Form No. 2441 similar to this page will be sent to railroads or car builders on request for their use in giving necessary information with orders for lighting fixtures.

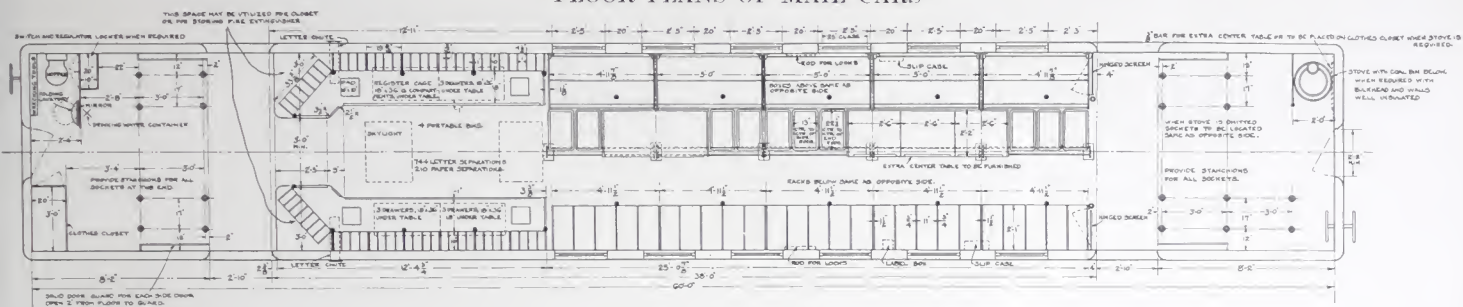
When ordering electric lighting fixtures for cars or apartments to be built according to standard plans, indicate dimensions R, X, and Z on cross section diagram, Form No. 2441.

When ordering Pintsch gas mantles lighting fixtures for cars or apartments to be built according to standard plans, indicate dimensions R, T, W, X, Y and Z on cross section diagram, Form No. 2441.

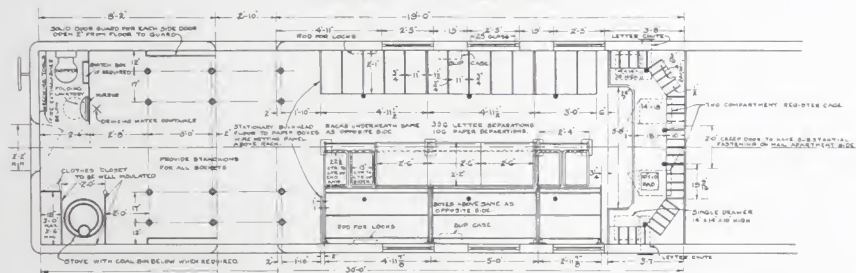
When ordering either electric or Pintsch gas mantle fixtures for old cars not built according to standard plans, indicate all dimensions on cross section diagram as required above together with dimensions indicated by arrows on car plans, Form No. 2441. The size of conduit should also be indicated on these car plans.



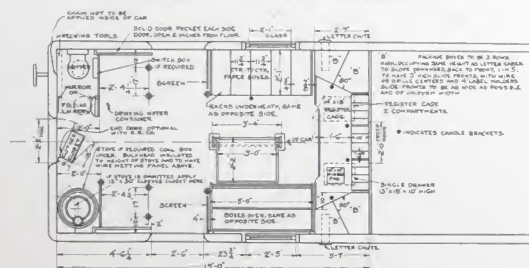
FLOOR PLANS OF MAIL CARS



STANDARD 60 Ft. Mail Car



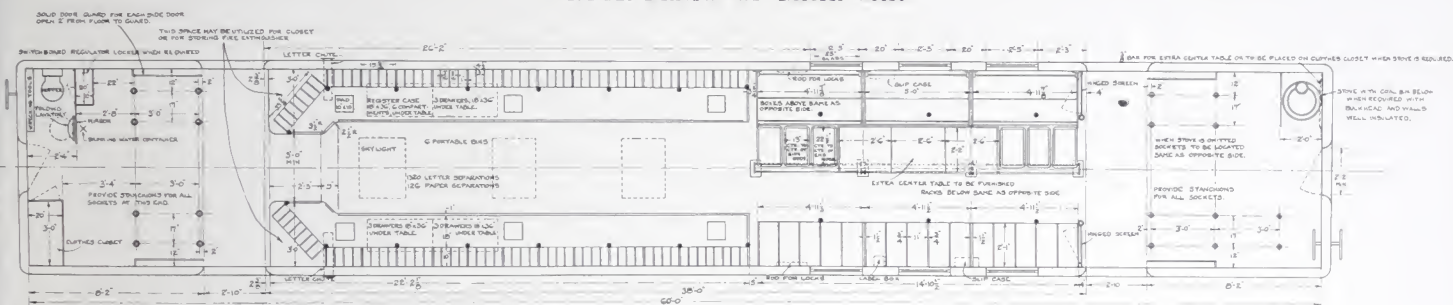
STANDARD 30 Ft. Mail Apartment



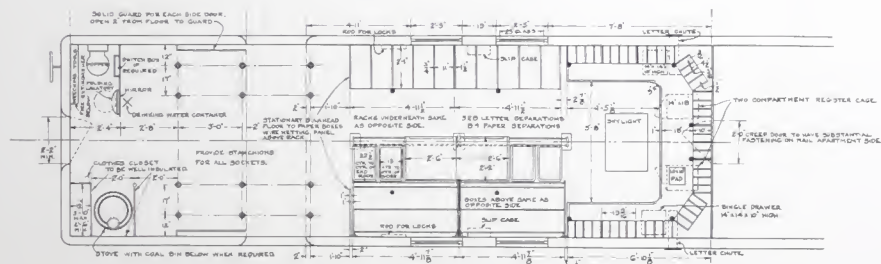
STANDARD 15 Ft. Mail Apartment



FLOOR PLANS OF MAIL CAR



60 FT. MAIL CAR WITH EXTENDED LETTER CASES.



30 FT. MAIL APARTMENT WITH EXTENDED LETTER CASES

LIST OF FIXTURES AND JUNCTION BOXES

REQUIRED FOR ELECTRIC AND EMERGENCY CANDLE LIGHTING
STANDARD 70 FT. MAIL CAR

USING

700-800 LUMEN LAMPS (PS 20-TYPE C)

FIXTURES

5	Bag-Rack Fixtures, including Reflector No. 51260, but less Junction Box and Electric Lamp.....	19205-B
4	Storage Fixtures, including Reflector No. 18465, but less Junction Box and Electric Lamp.....	19295
4	Letter Case Fixtures, including Reflector No. 51270, but less Junction Box and Electric Lamp.....	19215-B
4	Door Fixtures, less Junction Box and Electric Lamp.....	19136
20	Candle Brackets, complete, including Chimney, Candle Wall Bracket and Flame-spreader.....	282

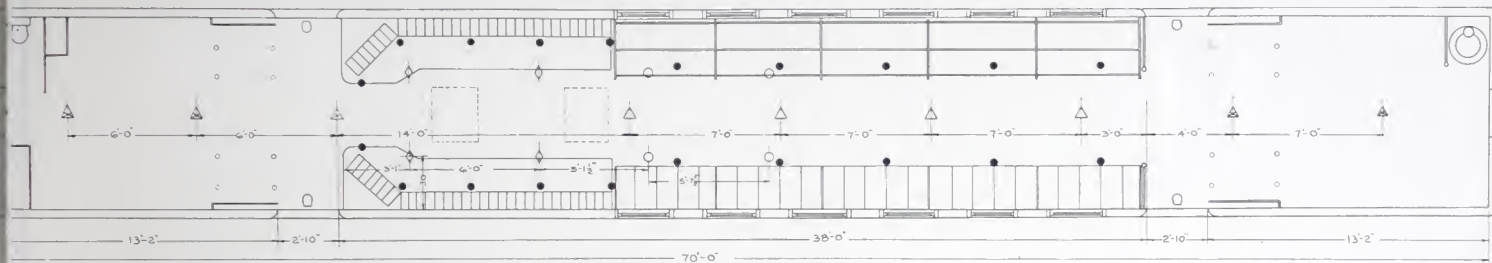
JUNCTION BOXES

1	Junction Box for Bag Rack Fixture.....	51803-B
1	Junction Box for Bag Rack Fixture.....	51803-C
* 3	Junction Boxes for Bag Rack Fixtures.....	51803-D
2	Junction Boxes for Storage Fixtures.....	52803-A
1	Junction Box for Storage Fixture.....	52803-D
1	Junction Box for Storage Fixture.....	52803-E
2	Junction Boxes for Letter Case Fixtures.....	51808-G
1	Junction Box for Letter Case Fixture.....	51808-B
1	Junction Box for Letter Case Fixture.....	51808-C
2	Junction Boxes for Door Fixtures.....	52095
2	Junction Boxes for Door Fixtures.....	52096

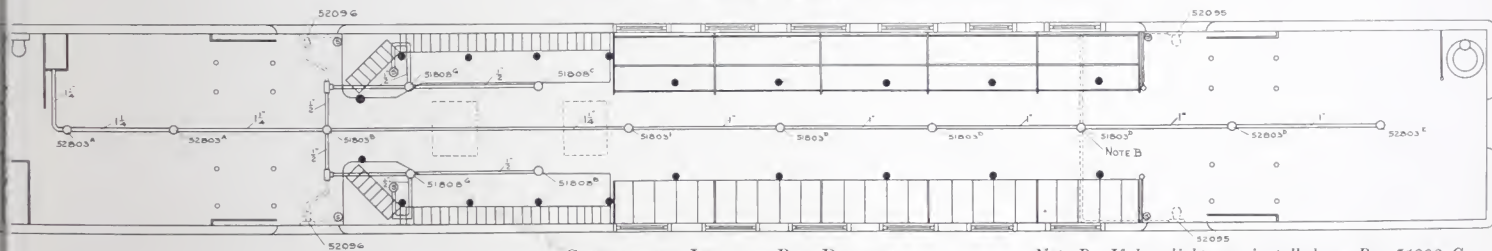
Note—Sectional diagrams of electric fixtures and junction boxes with instructions for ordering shown on pages 25, 27 and 29.

** If door fixtures are installed use one Junction Box No. 51803-G instead of 51803-D.*

STANDARD 70 FT. MAIL CAR
USING
ELECTRIC LAMP 700-800 LUMEN

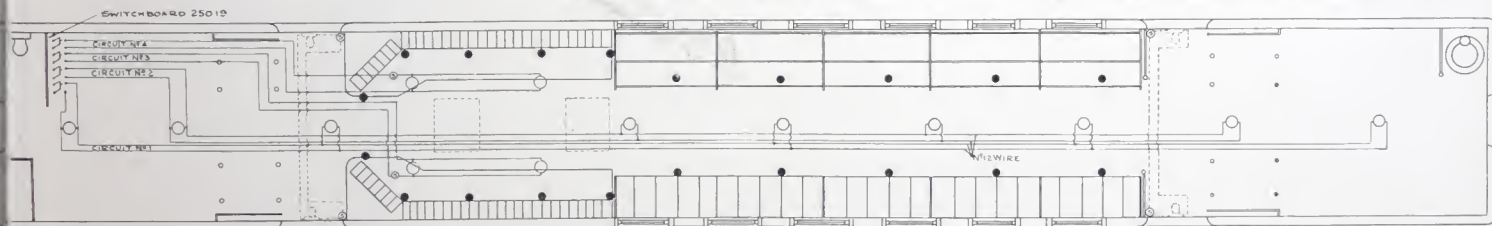


LIGHTING AND FIXTURE LAYOUT



CONDUIT AND JUNCTION BOX DIAGRAM

Note B - If door lights are installed use Box 51803-G



WIRING DIAGRAM

- △ Indicates Fixture 19205-B with PS 20 Bulb and Reflector No. 51260.
- △ Indicates Fixture 19295 with PS 20 Bulb.
- ◇ Indicates Fixture 19215-B with PS 20 Bulb and Reflector No. 51270.
- Indicates Fixture 19136 with PS 20 Bulb.

- Indicates Candle Bracket No. 282.
- Indicates position of furring to be installed when building car, to accommodate extra letter case fixtures, if required.

Note—300 ampere hours storage battery is required to fulfil reserve capacity specifications.

LIST OF FIXTURES AND JUNCTION BOXES

REQUIRED FOR ELECTRIC AND EMERGENCY CANDLE LIGHTING

STANDARD 70 FT. MAIL CAR

USING

500-600 LUMEN LAMPS (G30-TYPE B)

FIXTURES

7	Bag Rack Fixtures, including Reflector No. 51260, but less Junction Box and Electric Lamp.....	19205-E
4	Storage Fixtures, including Reflector No. 18465, but less Junction Box and Electric Lamp.....	19295
6	Letter Case Fixtures, including Reflector No. 51270, but less Junction Box and Electric Lamp.....	19215-E
4	Door Fixtures, less Junction Box and Electric Lamp.....	19136
20	Candle Brackets, complete, including Chimney, Candle, Wall Bracket and Flame spreader.....	282

Note—Sectional diagrams of electric fixtures and junction boxes with instructions for ordering shown on pages 25, 27 and 29.

JUNCTION BOXES

1	Junction Box for Bag Rack Fixture.....	51803-B
1	Junction Box for Bag Rack Fixture.....	51803-I
*5	Junction Boxes for Bag Rack Fixtures.....	51803-D
2	Junction Boxes for Storage Fixtures.....	52803-A
1	Junction Box for Storage Fixture.....	52803-D
1	Junction Box for Storage Fixture.....	52803-C
2	Junction Boxes for Letter Case Fixtures.....	51808-G
2	Junction Boxes for Letter Case Fixtures.....	51808-F
1	Junction Box for Letter Case Fixture.....	51808-B
1	Junction Box for Letter Case Fixture.....	51808-C
2	Junction Boxes for Door Fixtures.....	52095
2	Junction Boxes for Door Fixtures.....	52096

* If door fixtures are installed use one Junction Box No. 51803-G instead of 51803-D.

LIST OF FIXTURES AND JUNCTION BOXES

REQUIRED FOR ELECTRIC AND EMERGENCY CANDLE LIGHTING

STANDARD 70 FT. MAIL CAR

USING

500-600 LUMEN LAMP (S 19-TYPE B)

FIXTURES

7	Bag Rack Fixtures, including Reflector No. 51260, but less Junction Box and Electric Lamp.....	19205-C
4	Storage Fixtures, including Reflector No. 18465, but less Junction Box and Electric Lamp.....	19295
6	Letter Case Fixtures, including Reflector No. 51270, but less Junction Box and Electric Lamp.....	19215-C
4	Door Fixtures, less Junction Box and Electric Lamp.....	19136
20	Candle Brackets, complete, including Chimney, Candle, Wall Bracket and Flame spreader.....	282

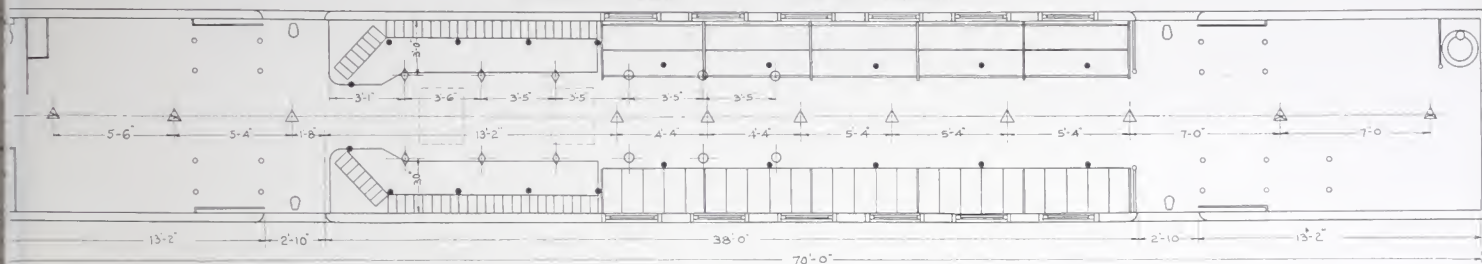
JUNCTION BOXES

1	Junction Box for Bag Rack Fixture.....	51803-B
1	Junction Box for Bag Rack Fixture.....	51803-I
*5	Junction Boxes for Bag Rack Fixtures.....	51803-D
2	Junction Boxes for Storage Fixtures.....	52803-A
1	Junction Box for Storage Fixture.....	52803-D
1	Junction Box for Storage Fixture.....	52803-C
2	Junction Boxes for Letter Case Fixtures.....	51808-G
2	Junction Boxes for Letter Case Fixtures.....	51808-F
1	Junction Box for Letter Case Fixture.....	51808-B
1	Junction Box for Letter Case Fixture.....	51808-C
2	Junction Boxes for Door Fixtures.....	52095
2	Junction Boxes for Door Fixtures.....	52096

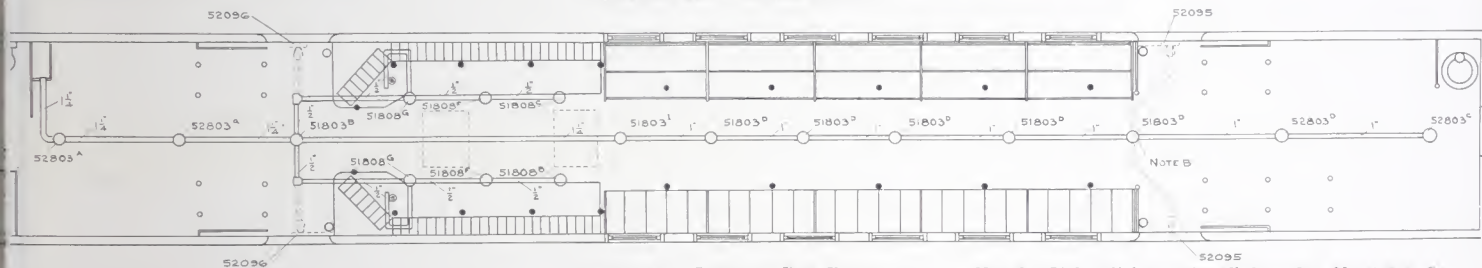
* If door fixtures are installed use one Junction Box No. 51803-G instead of 51803-D.

Note—Sectional diagrams of electric fixtures and junction boxes with instructions for ordering shown on pages 25, 27 and 29.

STANDARD 70 FT. MAIL CAR
USING
ELECTRIC LAMP 500-600 LUMEN

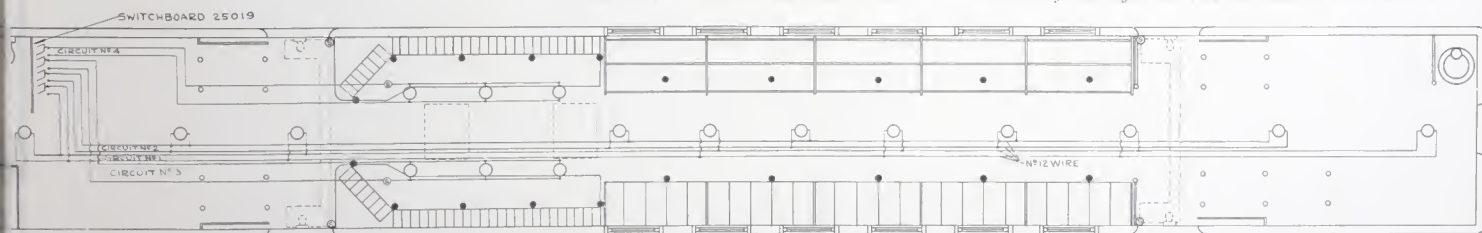


LIGHTING AND FIXTURE LAYOUT



CONDUIT AND JUNCTION BOX DIAGRAM

Note B—If door lights are installed use Box No. 51803-G



WIRING DIAGRAM

- △ Indicates Fixture { 19205-E with G-30 } Bulb and Reflector No. 51260.
- { 19205-C with S-19 } Bulb.
- △ Indicates Fixture 19295 with { G-30 } Bulb.
- { S-19 } Bulb.
- ◆ Indicates Fixture { 19215-E with G-30 } Bulb and Reflector No. 51270.
- { 19215-C with S-19 } Bulb.

- Indicates Fixture 19136 with S-19 Bulb.
- Indicates Candle Bracket No. 282.
- Indicates position of furring to be installed when building car, to accommodate extra letter case fixtures, if required.

Note—350 ampere hour storage battery is required to fulfil reserve capacity specifications.

LIST OF FIXTURES AND JUNCTION BOXES

REQUIRED FOR ELECTRIC AND EMERGENCY CANDLE LIGHTING
STANDARD 70 FT. MAIL CAR

USING

225-275 LUMEN LAMPS (S 17-TYPE B)

FIXTURES

12	Bag Rack Fixtures, including Reflector No. 51260, but less Junction Box and Electric Lamp.....	19205-D.
6	Storage Fixtures, including Reflector No. 51270, but less Junction Box and Electric Lamp.....	19295
10	Letter Case Fixtures, but less Junction Box and Electric Lamp.....	19215 D
4	Door Fixtures, less Junction Box and Electric Lamp.....	19136
20	Candle Brackets, complete, including Chimney, Candle, Wall Bracket and Flame spreader.....	282

JUNCTION BOXES

1	Junction Box for Bag Rack Fixture.....	51803-B
1	Junction Box for Bag Rack Fixture.....	51803- B I
*10	Junction Boxes for Bag Rack Fixtures.....	51803-D
3	Junction Boxes for Storage Fixtures.....	52803-A
2	Junction Boxes for Storage Fixtures.....	52803-D
1	Junction Box for Storage Fixture.....	52803-E
2	Junction Boxes for Letter Case Fixtures.....	51808-G
6	Junction Boxes for Letter Case Fixtures.....	51808-F
1	Junction Box for Letter Case Fixture.....	51808-B
1	Junction Box for Letter Case Fixture.....	51808-C
4	Junction Boxes for Door Fixtures.....	52096

Note—Sectional diagrams of electric fixtures and junction boxes with instructions for ordering shown on pages 25, 27 and 29.

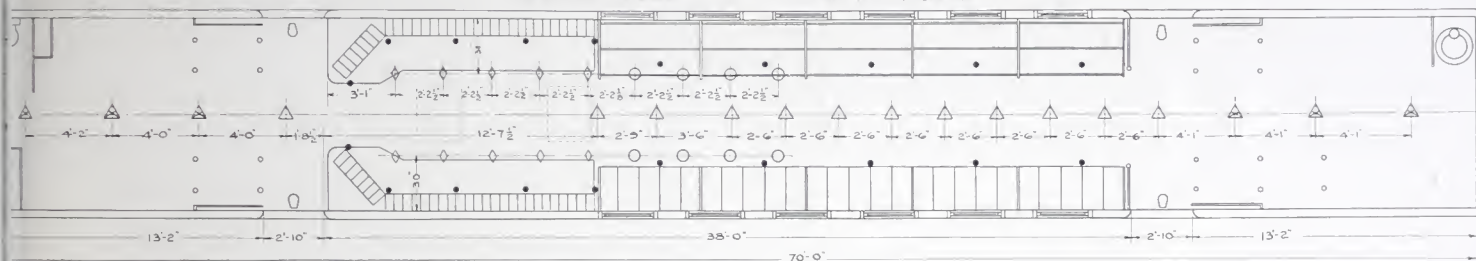
**If door fixtures are installed use one Junction Box No. 51803-G instead of 51803-D.*

STANDARD 70 FT. MAIL CAR

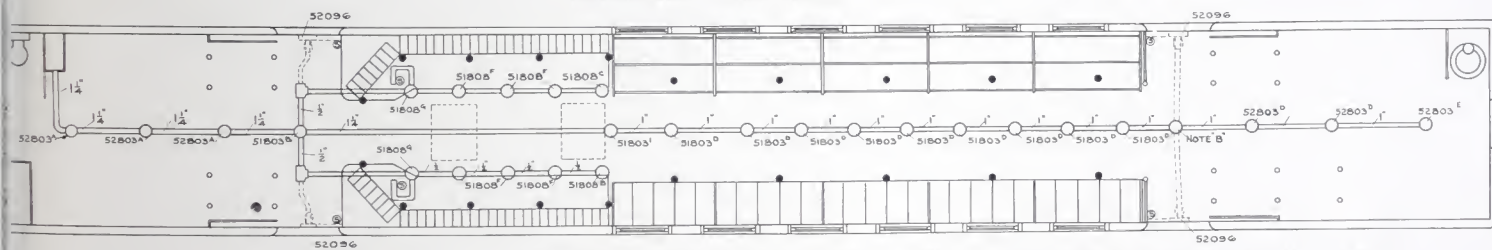
USING

ELECTRIC LAMP

225-275 LUMEN

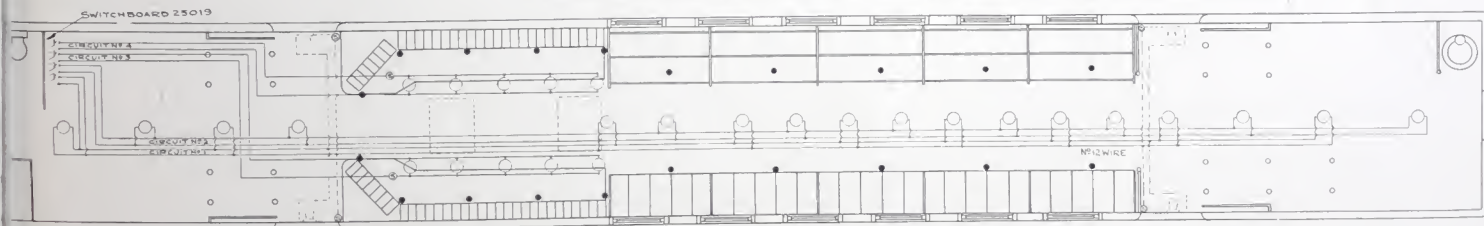


LIGHTING AND FIXTURE LAYOUT



CONDUIT AND JUNCTION BOX DIAGRAM

Note B—If door lights are installed use Box No. 51803-G



WIRING DIAGRAM

- △ Indicates Fixture 19205-D with S-17 Bulb and Reflector No. 51260.
- △ Indicates Fixture 19293 with S-17 Bulb.
- ◇ Indicates Fixture 19215-D with S-17 Bulb and Reflector No. 51270.
- Indicates Fixture 19136 with S-17 Bulb.

- Indicates Candle Bracket No. 282.
- Indicates position of furring to be installed when building car, to accommodate extra letter case fixtures if required.

Note—300 ampere hour storage battery is required to fulfil reserve capacity specifications.

LIST OF FIXTURES

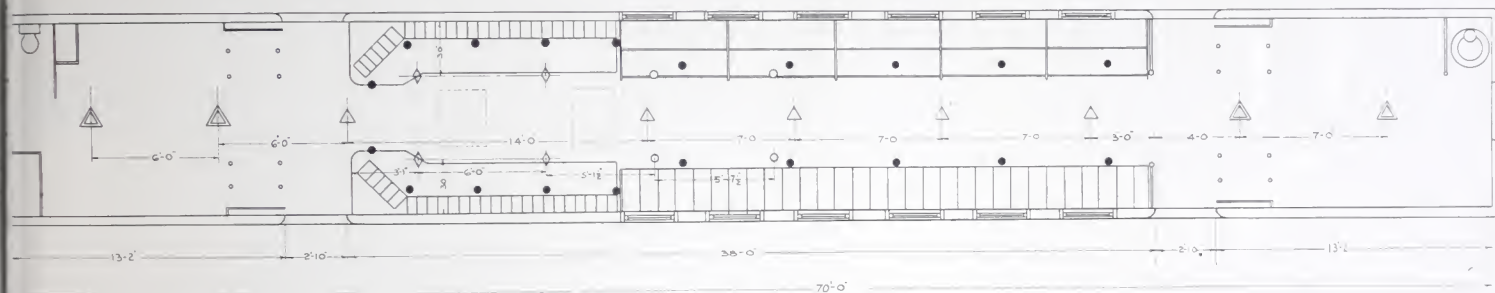
REQUIRED FOR PINTSCH GAS AND EMERGENCY CANDLE LIGHTING
STANDARD 70 FT. MAIL CAR

850 LUMEN

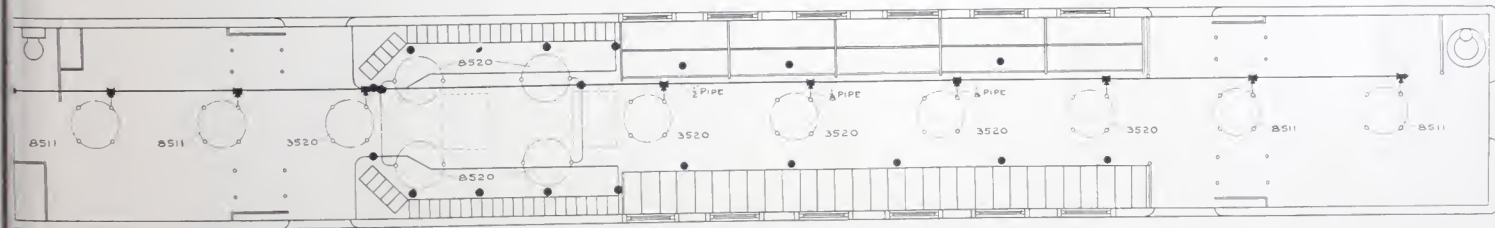
5	Center Fixtures, with Reflector No. 51250.....	3520
4	Storage Fixtures, with Reflector No. 52048.....	8511
4	Letter Case Fixtures, with Reflector No. 51252.....	8520
20	Candle Brackets, complete, including Chimney, Candle, Wall Bracket and Flame Spreader.....	282

Note—Sectional diagrams of Pintsch Gas Fixtures with instructions for ordering shown on pages 31, 33 and 35.

STANDARD 70 FT. MAIL CAR
USING
PINTSCH GAS MANTLE 850 LUMEN



LIGHTING AND FIXTURE LAYOUT



PIPING DIAGRAM

- △ Indicates Fixture No. 3520 with Reflector No. 51250.
- ◻ Indicates Fixture No. 8511 with Reflector No. 52048.
- ◊ Indicates Fixture No. 8520 with Reflector No. 51252.

- Indicates Candle Bracket No. 282.
- Indicates position of furring to be installed when building car, to accommodate extra letter case fixtures, if required.

Note—4 Gas Holders No. 250, or 5 Gas Holders No. 249 required for specified storage capacity.

LIST OF FIXTURES AND JUNCTION BOXES

REQUIRED FOR ELECTRIC AND EMERGENCY CANDLE LIGHTING
STANDARD 60 FT. MAIL CAR

USING

700-800 LUMEN LAMPS (PS 20-TYPE C)

FIXTURES

5	Bag Rack Fixtures, including Reflector No. 51260, but less Junction Box and Electric Lamp	19205-B
2	Storage Fixtures, including Reflector No. 18465, but less Junction Box and Electric Lamp	19295
4	Letter Case Fixtures, including Reflector No. 51270, but less Junction Box and Electric Lamp	19215-B
4	Door Fixtures, less Junction Box and Electric Lamp	19136
20	Candle Brackets, complete including Chimney, Candle, Wall Bracket and Flame Spreader	282

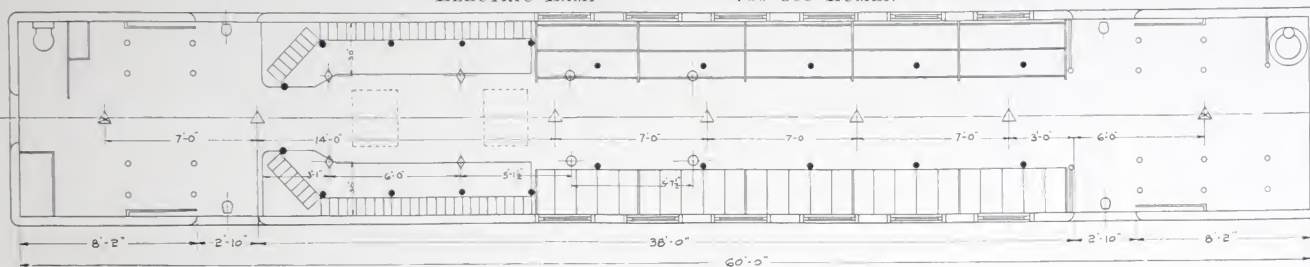
JUNCTION BOXES

1	Junction Box for Bag Rack Fixture	51803-B
1	Junction Box for Bag Rack Fixture	51803-I
*3	Junction Boxes for Bag Rack Fixtures	51803-D
1	Junction Box for Storage Fixture	52803-A
1	Junction Box for Storage Fixture	52803-E
2	Junction Boxes for Letter Case Fixtures	51808-G
1	Junction Box for Letter Case Fixture	51808-B
1	Junction Box for Letter Case Fixture	51808-C
2	Junction Boxes for Door Fixtures	52095
2	Junction Boxes for Door Fixtures	52096

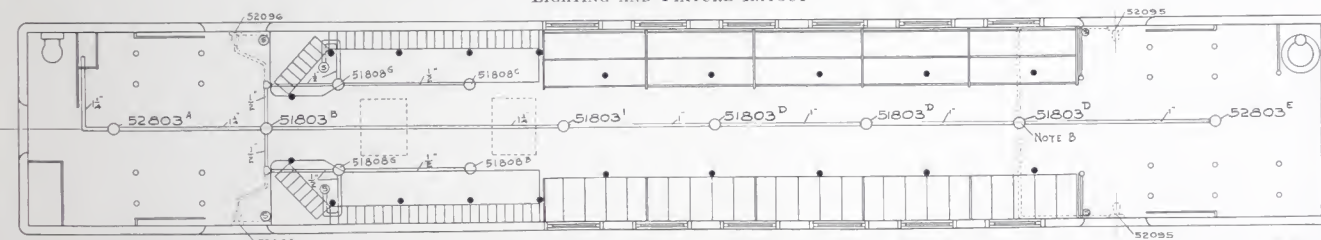
Note—Sectional diagrams of electric fixtures and junction boxes with instructions for ordering shown on pages 25, 27 and 29.

** If door fixtures are installed use one Junction Box No. 51803-G instead of 51803-D.*

STANDARD 60 FT. MAIL CAR
USING
ELECTRIC LAMP 700-800 LUMEN

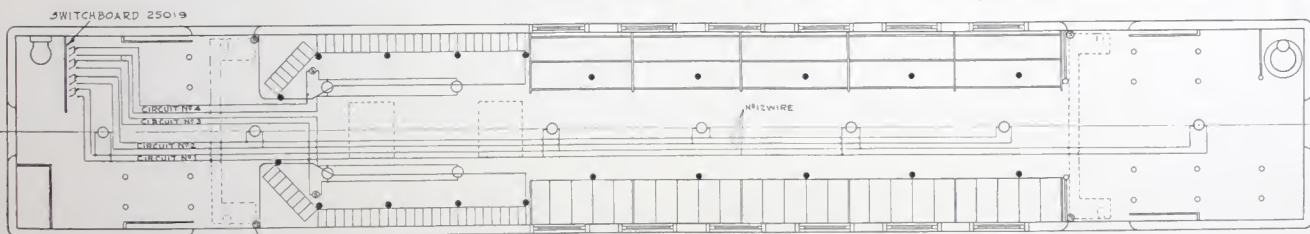


LIGHTING AND FIXTURE LAYOUT



CONDUIT AND JUNCTION BOX DIAGRAM

Note B—If door lights are installed use Box 51803-G.



WIRING DIAGRAM

- △ Indicates Fixture 19205-B with PS 20 Bulb and Reflector No. 51260.
- ▲ Indicates Fixture 19295 with PS 20 Bulb.
- ◇ Indicates Fixture 19215-B with PS 20 Bulb and Reflector No. 51270.
- Indicates Fixture 19136 with PS 20 Bulb.

- Indicates Candle Bracket No. 282.
- Indicates position of furring to be installed when building car, to accommodate extra letter case fixtures, if required.

Note—300 ampere hour storage battery is required to fulfil reserve capacity specifications.

LIST OF FIXTURES AND JUNCTION BOXES

REQUIRED FOR ELECTRIC AND EMERGENCY CANDLE LIGHTING
STANDARD 60 FT. MAIL CAR
USING
500-600 LUMEN LAMP (G 30-TYPE B)

FIXTURES

7	Bag Rack Fixtures, including Reflector No. 51260, but less Junction Box and Electric Lamp.....	19205-E
2	Storage Fixtures, including Reflector No. 18465, but less Junction Box and Electric Lamp.....	19295
6	Letter Case Fixtures, including Reflector No. 51270, but less Junction Box and Electric Lamp.....	19215-E
4	Door Fixtures, less Junction Box and Electric Lamp....	19136
20	Candle Brackets, complete, including Chimney, Candle, Wall Bracket and Flame Spreader.....	282

JUNCTION BOXES

*5	Junction Boxes for Bag Rack Fixtures.....	51803-D
1	Junction Box for Bag Rack Fixture.....	51803-B
1	Junction Box for Bag Rack Fixture.....	51803-I
1	Junction Box for Storage Fixture.....	52803-A
1	Junction Box for Storage Fixture.....	52803-E
2	Junction Boxes for Door Fixtures.....	52095
2	Junction Boxes for Door Fixtures.....	52096
2	Junction Boxes for Letter Case Fixtures.....	51808-G
2	Junction Boxes for Letter Case Fixtures.....	51808-F
1	Junction Box for Letter Case Fixture.....	51808-B
1	Junction Box for Letter Case Fixture.....	51808-C

Note—Sectional diagrams of electric fixtures and junction boxes with instructions for ordering shown on pages 25, 27 and 29.

**If door fixtures are installed use one Junction Box No. 51803-G instead of No. 51803-D.*

LIST OF FIXTURES AND JUNCTION BOXES

REQUIRED FOR ELECTRIC AND EMERGENCY CANDLE LIGHTING
STANDARD 60 FT. MAIL CAR
USING
500-600 LUMEN LAMP (S 19-TYPE B)

FIXTURES

7	Bag Rack Fixtures, including Reflector No. 51260, but less Junction Box and Electric Lamp.....	19205-C
2	Storage Fixtures, including Reflector No. 18465, but less Junction Box and Electric Lamp.....	19295
6	Letter Case Fixtures, including Reflector No. 51270, but less Junction Box and Electric Lamp.....	19215-C
4	Door Fixtures, less Junction Box and Electric Lamp....	19136
20	Candle Brackets, complete including Chimney, Candle, Wall Bracket and Flame Spreader.....	282

JUNCTION BOXES

*5	Junction Boxes for Bag Rack Fixtures.....	51803-D
1	Junction Box for Bag Rack Fixture.....	51803-B
1	Junction Box for Bag Rack Fixture.....	51803-I
1	Junction Box for Storage Fixture.....	52803-A
1	Junction Box for Storage Fixture.....	52803-E
2	Junction Boxes for Door Fixtures.....	52095
2	Junction Boxes for Door Fixtures.....	52096
2	Junction Boxes for Letter Case Fixtures.....	51808-G
2	Junction Boxes for Letter Case Fixtures.....	51808-F
1	Junction Box for Letter Case Fixture.....	51808-B
1	Junction Box for Letter Case Fixture.....	51808-C

Note—Sectional diagrams of electric fixtures and junction boxes with instructions for ordering shown on pages 25, 27 and 29.

**If door fixtures are installed use one Junction Box No. 51803-G instead of No. 51803-D.*

LIST OF FIXTURES AND JUNCTION BOXES

REQUIRED FOR ELECTRIC AND EMERGENCY CANDLE LIGHTING
STANDARD 60 FT. MAIL CAR

USING

225-275 LUMEN LAMP (S 17—TYPE B)

FIXTURES

12	Bag Rack Fixtures, including Reflector No. 51260, but less Junction Box and Electric Lamp	19205-D
4	Storage Fixtures, including Reflector No. 18465, but less Junction Box and Electric Lamp	19295
10	Letter Case Fixtures, including Reflector No. 51270, but less Junction Box and Electric Lamp	19215-D
4	Door Fixtures, less Junction Box and Electric Lamp	19136
20	Candle Brackets, complete, including Chimney, Candle, Wall Bracket and Flame spreader	282

JUNCTION BOXES

1	Junction Box for Bag Rack Fixture	51803-B
1	Junction Box for Bag Rack Fixture	51803- B I
*10	Junction Boxes for Bag Rack Fixtures	51803-D
2	Junction Boxes for Storage Fixtures	52803-A
1	Junction Box for Storage Fixture	52803-D
1	Junction Box for Storage Fixture	52803-E
2	Junction Boxes for Letter Case Fixtures	51808-G
6	Junction Boxes for Letter Case Fixtures	51808-F
1	Junction Box for Letter Case Fixture	51808-B
1	Junction Box for Letter Case Fixture	51808-C
4	Junction Boxes for Door Fixtures	52096

Note—Sectional diagrams of electric fixtures and junction boxes with instructions for ordering shown on pages 25, 27 and 29.

**If door fixtures are installed use one Junction Box No. 51803-G instead of No. 51803-D.*

LIST OF FIXTURES

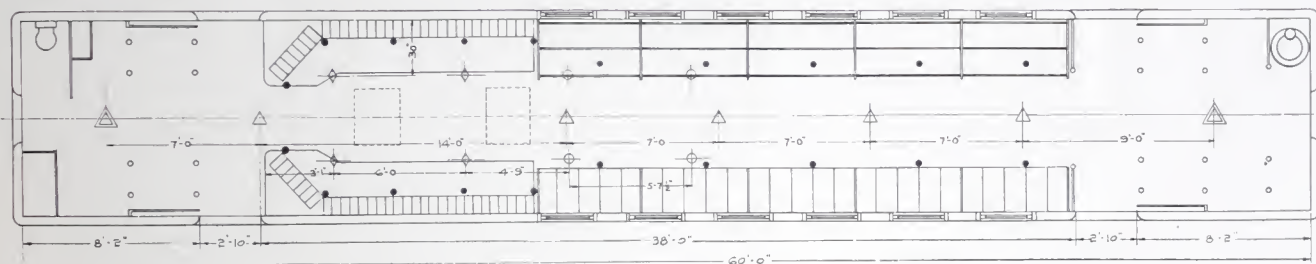
REQUIRED FOR PINTSCH GAS AND EMERGENCY CANDLE LIGHTING
STANDARD 60 FT. MAIL CAR

850 LUMEN

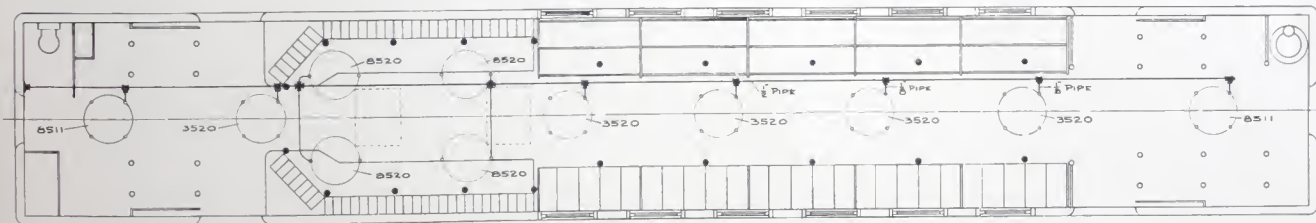
5	Bag Rack Fixtures, with Reflector No. 51250	3520
2	Storage Fixtures, with Reflector No. 52048	8511
4	Letter Case Fixtures, with Reflector No. 51252	8520
20	Candle Brackets, complete, including Chimney, Candle, Wall Bracket and Flame Spreader	282

Note—Sectional diagrams of Pintsch Gas Fixtures with instructions for ordering shown on pages 31, 33 and 35.

STANDARD 60 FT. MAIL CAR
USING
PINTSCH GAS MANTLE 850 LUMEN



LIGHTING AND FIXTURE LAYOUT



PIPING DIAGRAM

- △ Indicates Fixture No. 3520 with Reflector No. 51250.
- ◻ Indicates Fixture No. 8511 with Reflector No. 52048.
- ◊ Indicates Fixture No. 8520 with Reflector No. 51252.

- Indicates Candle Bracket No. 282.
- Indicates position of fitting to be installed when building car, to accommodate extra letter case fixtures, if required.

Note—3 Gas Holders No. 250, or 4 Gas Holders No. 249, required for specified storage capacity.

LIST OF FIXTURES AND JUNCTION BOXES

REQUIRED FOR ELECTRIC AND EMERGENCY CANDLE LIGHTING

30 FT. MAIL APARTMENT 30 FT. BAGGAGE APARTMENT

USING

700-800 LUMEN LAMPS (PS 20—TYPE C)

MAIL APARTMENT

FIXTURES

3	Bag Rack Fixtures, including Reflector No. 51260, but less Junction Box and Electric Lamp.....	19205-B
1	Storage Fixture, including Reflector No. 18465, but less Junction Box and Electric Lamp.....	19295
2	Letter Case Fixtures, including Reflector No. 51270, but less Junction Box and Electric Lamp.....	19215-B
2	Door Fixtures, less Junction Boxes and Electric Lamp....	19136
10	Candle Brackets, complete, including Chimney, Candle, Wall Bracket and Flame spreader.....	282

JUNCTION BOXES

*2	Junction Boxes for Bag Rack Fixtures.....	51803-A
1	Junction Box for Bag Rack Fixture.....	51803-C
1	Junction Box for Storage Fixture.....	52803-A
1	Junction Box for Letter Case Fixture.....	51808-B
1	Junction Box for Letter Case Fixture.....	51808-C
2	Junction Boxes for Door Fixture.....	52096

**If door fixtures are installed use one Junction Box No. 51803-B instead of No. 51803-A.*

BAGGAGE APARTMENT

FIXTURES

3	Center Fixtures, less Junction Box and Electric Lamp....	19235
2	Door Fixtures, less Junction Box and Electric Lamp.....	19136

JUNCTION BOXES

*3	Junction Boxes for Center Fixtures.....	52800-B
2	Junction Boxes for Door Fixtures.....	52095

Note—For convenience in ordering, Fixture No. 19235 and Junction Box No. 52800 have been given catalogue No. 19211, and take same suffix as corresponding Junction Box. Thus: Fixture No. 19235 with Junction Box No. 52800-B is No. 19211-B.

Note—Sectional diagrams of electric fixtures and junction boxes with instructions for ordering shown on pages 25, 27 and 29.

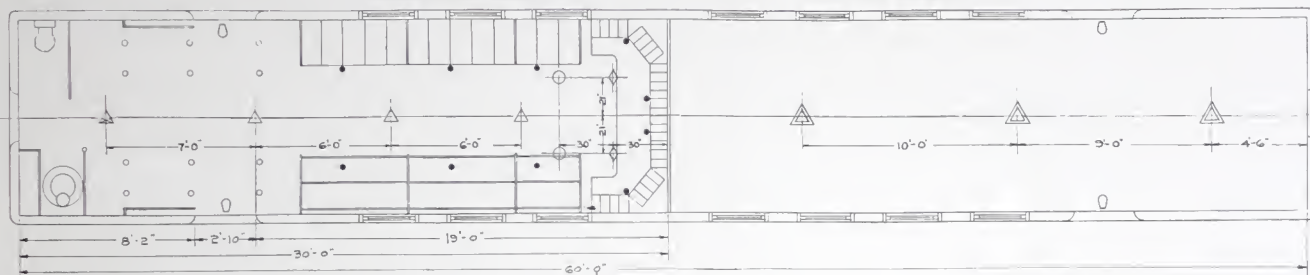
**If door fixtures are installed use one Junction Box No. 52800-C instead of No. 52800-B.*

STANDARD 30 FT. MAIL APARTMENT

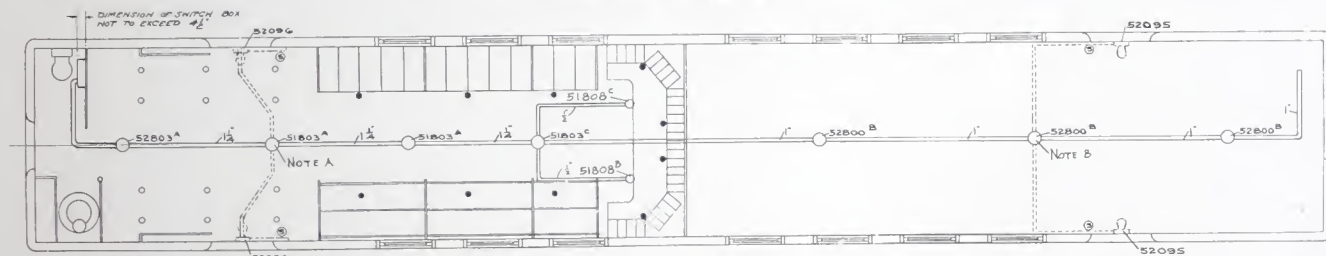
USING

ELECTRIC LAMP

700-800 LUMEN



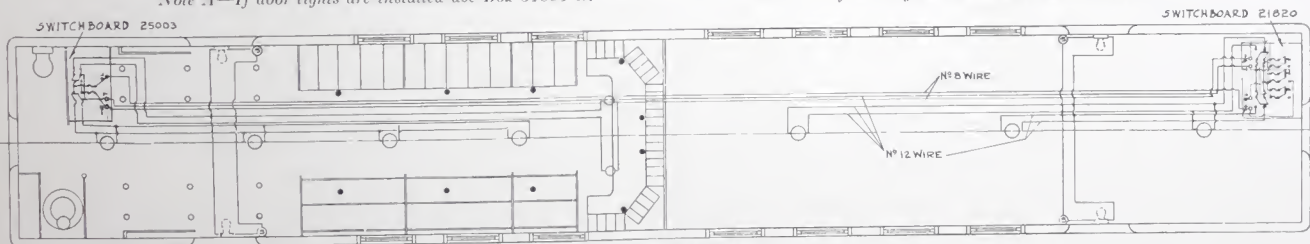
LIGHTING AND FIXTURE LAYOUT



CONDUIT AND JUNCTION BOX DIAGRAM

Note A—If door lights are installed use Box 51803-B.

Note B—If door lights are installed use Box 52800-C.



WIRING DIAGRAM

△Indicates Fixture 19205-B with PS 20 Bulb and Reflector No. 51260.

△Indicates Fixture 19205 with PS 20 Bulb.

△Indicates Fixture 19235 with PS 20 Bulb.

◇Indicates Fixture 19215-B with PS 20 Bulb and Reflector No. 51270.

○Indicates Fixture No. 19136 with PS 20 Bulb.

●Indicates Candle Bracket No. 282.

○Indicates position of furring to be installed when building car, to accommodate extra letter case fixtures, if required.

Note—200 ampere hour storage battery is required to fulfil reserve capacity specifications.

LIST OF FIXTURES AND JUNCTION BOXES
REQUIRED FOR ELECTRIC AND EMERGENCY CANDLE LIGHTING
30 FT. MAIL APARTMENT 30 FT. BAGGAGE APARTMENT

USING

500-600 LUMEN LAMP (G 30—TYPE B)

MAIL APARTMENT

FIXTURES

4	Bag Rack Fixtures, including Reflector No. 51260, but less Junction Box and Electric Lamp.....	19205-E
1	Storage Fixture, including Reflector No. 18465, but less Junction Box and Electric Lamp.....	19295
2	Letter Case Fixtures, including Reflector No. 51270, but less Junction Box and Electric Lamp.....	19215-E
2	Door Fixtures, less Junction Box and Electric Lamp.....	19136
10	Candle Brackets, complete, including Chimney, Candle, Wall Bracket and Flame spreader.....	282

JUNCTION BOXES

*4	Junction Boxes for Bag Rack Fixtures.....	51803-A
†1	Junction Box (no Fixture) for Conduit to Letter Cases...	51803-C
1	Junction Box for Storage Fixture.....	52803-A
2	Junction Boxes for Letter Case Fixtures.....	51808-K
2	Junction Boxes for Door Fixtures.....	52096

*If door fixtures are installed use one Junction Box No. 51803-B instead of No. 51803-A.

†This Junction Box has a blank cover and does not include a socket. It is used for conduit and wiring only.

BAGGAGE APARTMENT

FIXTURES

4	Center Fixtures, less Junction Box and Electric Lamp....	19235
2	Door Fixtures, less Junction Box and Electric Lamp.....	19136

JUNCTION BOXES

*4	Junction Boxes for Center Fixtures.....	52800-B
2	Junction Boxes for Door Fixtures.....	52096

Note—For convenience in ordering, Fixture No. 19235 and Junction Box No. 52800 have been given Catalogue No. 19211 and take same suffix as corresponding Junction Box. Thus: Fixture No. 19235 with Junction Box No. 52800-B is No. 19211-B.

Note—Sectional diagrams of electric fixtures and junction boxes with instructions for ordering shown on pages 25, 27 and 29.

*If door fixtures are installed, use one Junction Box No. 52800-C instead of No. 52800-B.

500-600 LUMEN LAMP

(S 19—TYPE B)

MAIL APARTMENT

FIXTURES

4	Bag Rack Fixtures, including Reflector No. 51260, but less Junction Box and Electric Lamp.....	19205-C
1	Storage Fixture, including Reflector No. 18465, but less Junction Box and Electric Lamp.....	19295
2	Letter Case Fixtures, including Reflector No. 51270, but less Junction Box and Electric Lamp.....	19215-C
2	Door Fixtures, less Junction Box and Electric Lamp.....	19136
10	Candle Brackets, complete, including Chimney, Candle, Wall Bracket and Flame spreader.....	282

JUNCTION BOXES

*4	Junction Boxes for Bag Rack Fixtures.....	51803-A
†1	Junction Box (no Fixture) for Conduit to Letter Cases...	51803-C
1	Junction Box for Storage Fixture.....	52803-A
2	Junction Boxes for Letter Case Fixtures.....	51808-K
2	Junction Boxes for Door Fixtures.....	52096

*If door fixtures are installed use one Junction Box No. 51803-B instead of No. 51803-A.

†This Junction Box has a blank cover and does not include a socket. It is used for conduit and wiring only.

BAGGAGE APARTMENT

FIXTURES

4	Center Fixtures less Junction Box and Electric Lamp....	19235
2	Door Fixtures less Junction Box and Electric Lamp.....	19136

JUNCTION BOXES

*4	Junction Boxes for Center Fixtures.....	52800-B
2	Junction Boxes for Door Fixtures.....	52096

Note—For convenience in ordering, Fixture No. 19235 and Junction Box No. 52800 have been given Catalogue No. 19211, and take same suffix as corresponding Junction Box. Thus: Fixture No. 19235 with Junction Box No. 52800-B is No. 19211-B.

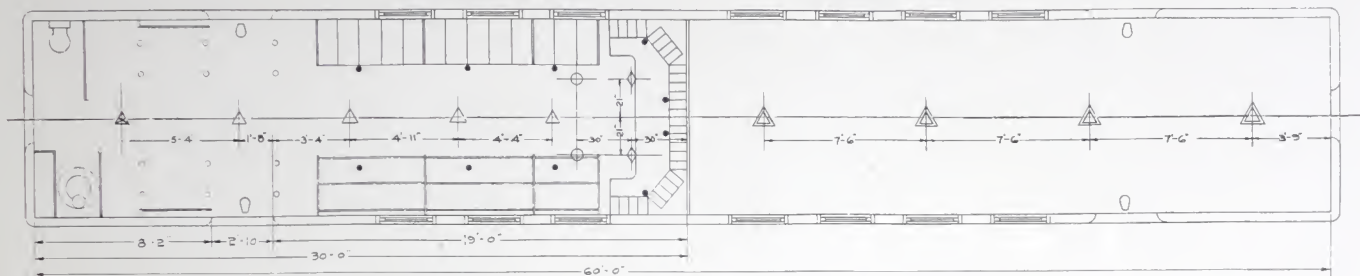
Note—Sectional diagrams of electric fixtures and junction boxes with instructions for ordering shown on pages 25, 27 and 29.

STANDARD 30 FT. MAIL APARTMENT

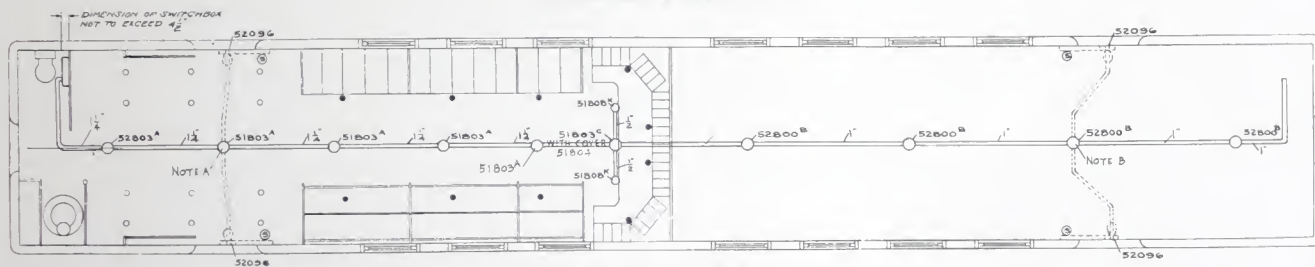
USING

ELECTRIC LAMP

500-600 LUMEN



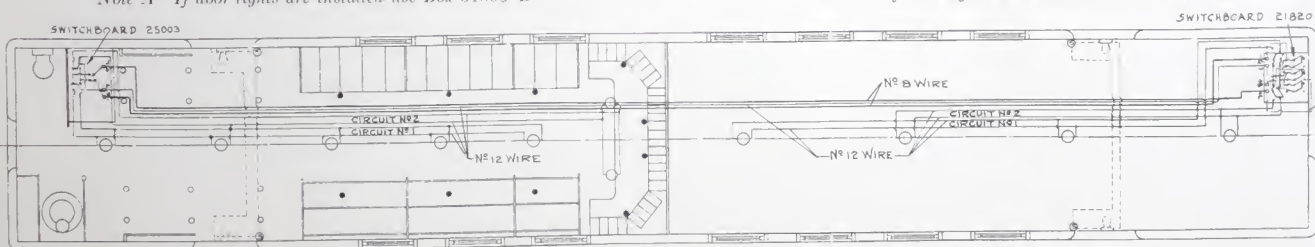
LIGHTING AND FIXTURE LAYOUT



CONDUIT AND JUNCTION BOX DIAGRAM

Note 4—If door lights are installed use Box 51803-D

Note B—If door lights are installed use Box 52800-C



WIRING DIAGRAM

△Indicates Fixture { 19205-E with G-30
 19205-G S-19 } Bulb and Reflector No. 51260.

ΔIndicates Fixture No. 19295 with $\left\{ \begin{array}{c} \text{G-30} \\ \text{S-19} \end{array} \right\}$ Bulb.

▲Indicates Fixture No. 19235 with $\left. \begin{array}{l} \text{G-30} \\ \text{S-19} \end{array} \right\}$ Bulb.

*Indicates Fixture { 19215-E G-30 } Bulb and Reflector No. 51270.
 { 19215-C S-19 }

○Indicates Fixture No. 19136 with S-19 Bulb.

•Indicates Candle Bracket No. 282.

○ Indicates position of furring to be installed when building car, to accommodate extra letter case fixtures, if required.

Note—225 ampere hour storage battery is required to fulfil reserve capacity specifications.

LIST OF FIXTURES AND JUNCTION BOXES

REQUIRED FOR ELECTRIC AND EMERGENCY CANDLE LIGHTING

30 FT. MAIL APARTMENT 30 FT. BAGGAGE APARTMENT

USING

225-275 LUMEN LAMP

(S 17—TYPE B)

MAIL APARTMENT

FIXTURES

5	Bag Rack Fixtures, including Reflector No. 51260, but less Junction Box and Electric Lamp.....	19205-D
2	Storage Fixtures, including Reflector No. 18465, but less Junction Box and Electric Lamp.....	19295
4	Letter Case Fixture, including Reflector No. 51270, but less Junction Box and Electric Lamp.....	19215-D
2	Door Fixtures, less Junction Box and Electric Lamp.....	19136
10	Candle Brackets, complete including Chimney, Candle, Wall Bracket and Flame spreader.....	282

JUNCTION BOXES

5	Junction Boxes for Bag Rack Fixtures.....	51803-A
*2	Junction Boxes for Storage Fixtures.....	52803-A
†1	Junction Box (no Fixture) for Conduit to Letter Cases.....	51803-C
2	Junction Boxes for Letter Case Fixtures.....	51808-P
2	Junction Boxes for Letter Case Fixtures.....	51808-K
2	Junction Boxes for Door Fixtures.....	52096

*If door fixtures are installed use one Junction Box No. 51803-B instead of No. 51803-A.

†This Junction Box has a blank cover and does not include a socket. It is used for conduit and wiring only.

BAGGAGE APARTMENT

FIXTURES

6	Center Fixtures less Junction Box and Electric Lamp.....	19235
2	Door Fixtures less Junction Box and Electric Lamp.....	19136

JUNCTION BOXES

6	Junction Boxes for Center Fixtures.....	52800-B
*2	Junction Boxes for Door Fixtures.....	52096

Note—For convenience in ordering, Fixture No. 19235 and Junction Box No. 52800 have been given Catalogue No. 19211 and take same suffix as corresponding Junction Box. Thus: Fixture No. 19235 with Junction Box No. 52800-B is No. 19211-B.

Note—Sectional diagrams of electric fixtures and junction boxes with instructions for ordering shown on pages 25, 27 and 29.

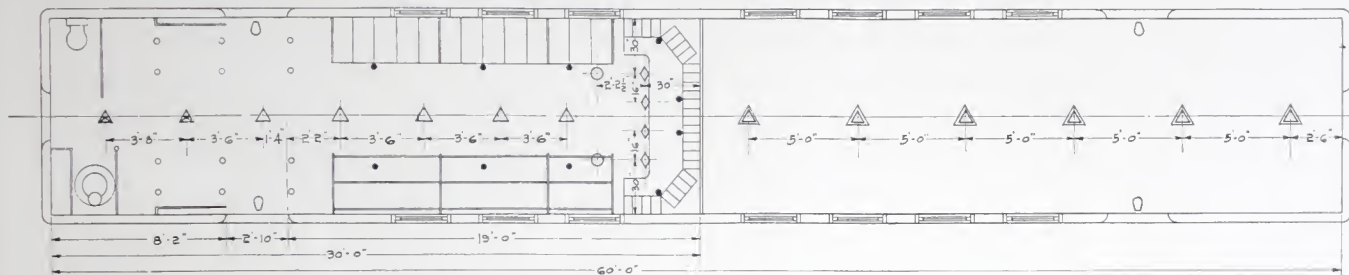
*If door fixtures are installed use one Junction Box No. 52800-C instead of No. 52800-B.

STANDARD 30 FT. MAIL APARTMENT

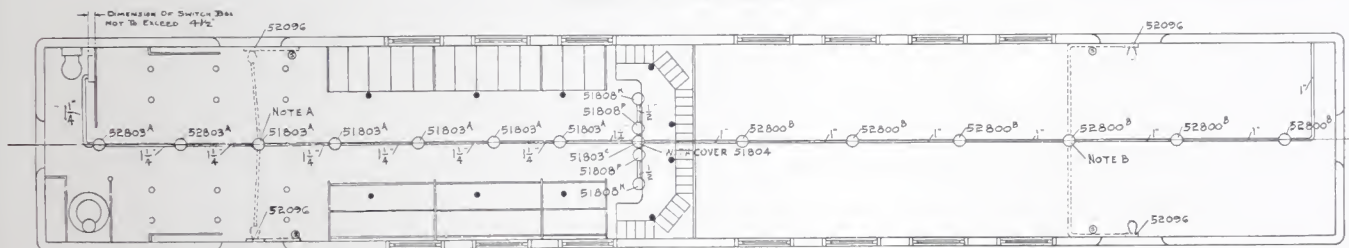
ELECTRIC LAMP

USING

225-275 LUMEN



LIGHTING AND FIXTURE LAYOUT



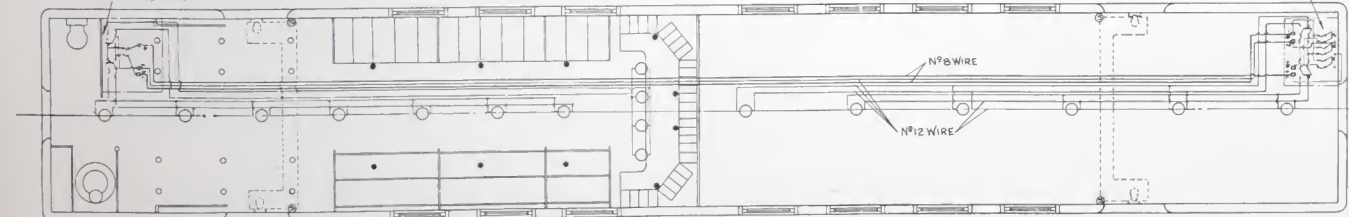
CONDUIT AND JUNCTION BOX DIAGRAM

Note A—If door lights are installed use Box 51803-D

Note B—If door lights are installed use Box 52800-C

SWITCHBOARD 25003

SWITCHBOARD 21826



WIRING DIAGRAM

△Indicates Fixture 19205-D with S-17 Bulb and Reflector No. 51260.

△Indicates Fixture 19295 with S-17 Bulb.

△Indicates Fixture 19235 with S-17 Bulb.

△Indicates Fixture 19215-D with S-17 Bulb and Reflector No. 51270

○Indicates Fixture No. 19136 with S-17 Bulb.

●Indicates Candle Bracket No. 282.

○Indicates position of furring to be installed when building car to accommodate extra letter case fixtures, if required.

Note—200 ampere hour storage battery is required to fulfil reserve capacity specifications.

LIST OF FIXTURES

REQUIRED FOR PINTSCH GAS AND EMERGENCY CANDLE LIGHTING

30 FT. MAIL APARTMENT 30 FT. BAGGAGE APARTMENT

850 LUMEN

MAIL APARTMENT

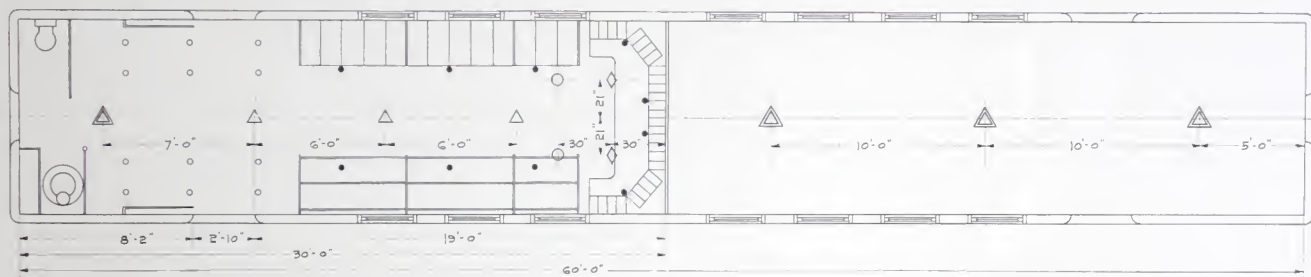
3	Bag Rack Fixtures, with Reflector No. 51250	3520
1	Storage Fixture, with Reflector No. 52048	8511
2	Letter Case Fixtures, with Reflector No. 51252	8520
10	Candle Brackets, complete, including Chimney, Candle, Wall Bracket and Flame Spreader	282

BAGGAGE APARTMENT

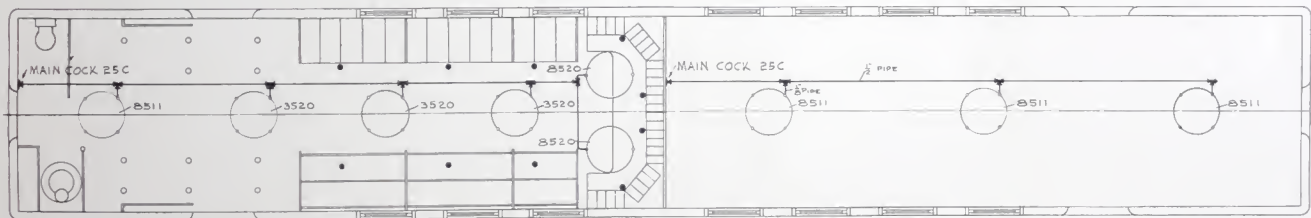
3	Center Fixtures, with Reflector No. 52048	8511
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Note—Sectional diagrams of Pintsch Gas Fixtures with instructions for ordering shown on pages 31, 33 and 35.

STANDARD 30 FT. MAIL APARTMENT
USING
PINTSCH GAS MANTLE 850 LUMEN



LIGHTING AND FIXTURE LAYOUT



PIPING DIAGRAM

- △ Indicates Fixture No. 3520 with Reflector No. 51250.
- ◻ Indicates Fixture No. 8511 with Reflector No. 52048.
- ◇ Indicates Fixture No. 8520 with Reflector No. 51252.

● Indicates Candle Bracket No. 282.

○ Indicates position of furring to be installed when building car, to accommodate extra letter case fixtures, if required.

Note—2 Gas Holders, No. 250; or 3 Gas Holders, No. 249 required for specified storage capacity.

LIST OF FIXTURES AND JUNCTION BOXES

REQUIRED FOR ELECTRIC AND EMERGENCY CANDLE LIGHTING

15 FT. MAIL APARTMENT 45 FT. BAGGAGE APARTMENT

USING

700-800 LUMEN LAMPS

(PS 20—TYPE C)

MAIL APARTMENT

FIXTURES

1	Bag Rack Fixture, including Reflector No. 51260, but less Junction Box and Electric Lamp.....	19205-B
1	Storage Fixture, including Reflector No. 18465, but less Junction Box and Electric Lamp.....	19295
2	Letter Case Fixtures, including Reflector No. 51270, but less Junction Box and Electric Lamp.....	19215-B
2	Door Fixtures, less Junction Boxes and Electric Lamp....	19136
5	Candle Brackets, complete, including Chimney, Candle, Wall Bracket and Flame spreader.....	282

JUNCTION BOXES

1	Junction Box for Bag Rack Fixture.....	51803-C
*1	Junction Box for Storage Fixture.....	52803-A
1	Junction Box for Letter Case Fixture.....	51808-B
1	Junction Box for Letter Case Fixture.....	51808-C
2	Junction Boxes for Door Fixtures.....	52095

*If door fixtures are installed use Junction Box No. 52803-C instead of No. 52803-A.

BAGGAGE APARTMENT

FIXTURES

5	Center Fixtures less Junction Box and Electric Lamp....	19235
2	Door Fixtures less Junction Box and Electric Lamp.....	19136

JUNCTION BOXES

*5	Junction Boxes for Center Fixtures.....	52800-B
2	Junction Boxes for Door Fixtures.....	52095

Note—For convenience in ordering, Fixture No. 19235 and Junction Box No. 52800 have been given Catalogue No. 19211, and take same suffix as corresponding Junction Box. Thus: Fixture No. 19235 with Junction Box No. 52800-B is No. 19211-B.

Note—Sectional diagrams of electric fixtures and junction boxes with instructions for ordering shown on pages 25, 27 and 29.

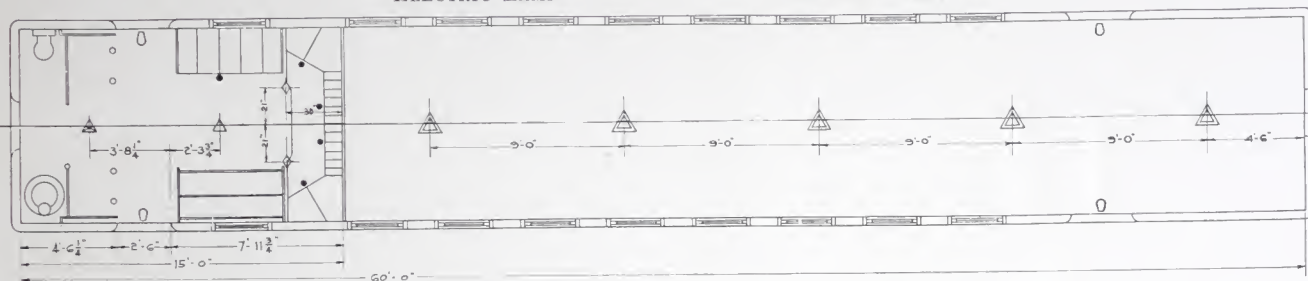
**If door fixtures are installed use one Junction Box No. 52800-C instead of No. 52800-B.*

STANDARD 15 FT. MAIL APARTMENT

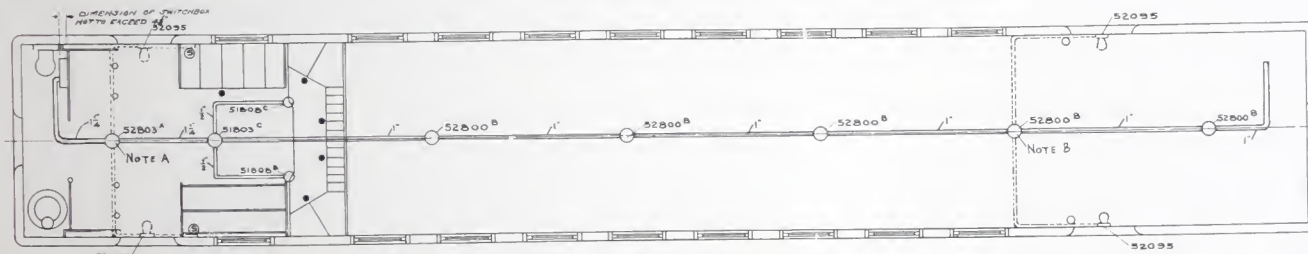
USING

ELECTRIC LAMP

700-800 LUMEN



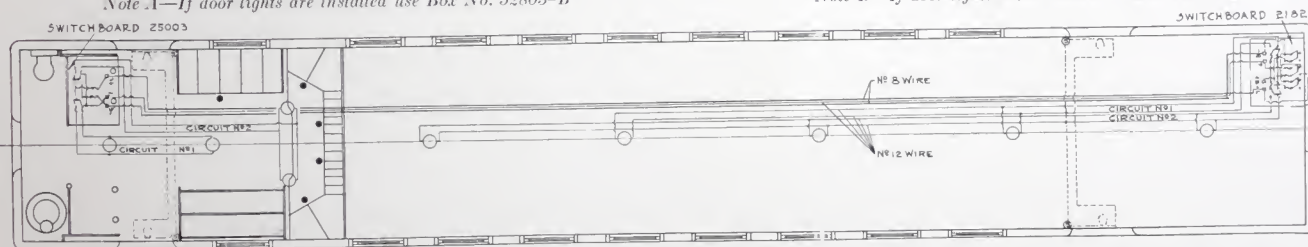
LIGHTING AND FIXTURE LAYOUT



CONDUIT AND JUNCTION BOX DIAGRAM

Note A—If door lights are installed use Box No. 52803-B

Note B—If door lights are installed use Box 52800-C



WIRING DIAGRAM

△Indicates Fixture 19205-B with PS 20 Bulb and Reflector No. 51260.

△Indicates Fixture 19295 with PS 20 Bulb.

△Indicates Fixture No. 19235 with PS 20 Bulb.

◇Indicates Fixture 19215-B with PS 20 Bulb and Reflector No. 51270.

◇Indicates Fixture No. 19136 with PS 20 Bulb.

•Indicates Candle Bracket No. 282.

Note—200 ampere hour storage battery is required to fulfil reserve capacity specifications.

- LIST OF FIXTURES AND JUNCTION BOXES

REQUIRED FOR ELECTRIC AND EMERGENCY CANDLE LIGHTING

15 FT. MAIL APARTMENT 45 FT. BAGGAGE APARTMENT

USING

500-600 LUMEN LAMP

(G 30—TYPE B)

500-600 LUMEN LAMP

(S 19—TYPE B)

MAIL APARTMENT

FIXTURES

1 Bag Rack Fixture, including Reflector No. 51260, but less Junction Box and Electric Lamp.....	19205-E
1 Storage Fixture, including Reflector No. 18465, but less Junction Box and Electric Lamp.....	19295
2 Letter Case Fixtures, including Reflector No. 51270, but less Junction Box and Electric Lamp.....	19215-E
2 Door Fixtures, less Junction Box and Electric Lamp.....	19136
5 Candle Brackets, complete, including Chimney, Candle, Wall Bracket and Flame spreader.....	282

JUNCTION BOXES

1 Junction Box for Bag Rack Fixture.....	51803-C
*1 Junction Box for Storage Fixture.....	52803-C
1 Junction Box for Letter Case Fixture.....	51808-B
1 Junction Box for Letter Case Fixture.....	51808-C
2 Junction Boxes for Door Fixtures.....	52096

*If door fixtures are installed use Junction Box No. 52803-B instead of No. 52803-C.

BAGGAGE APARTMENT

FIXTURES

6 Center Fixtures, less Junction Box and Electric Lamp....	19235
2 Door Fixtures, less Junction Box and Electric Lamp.....	19136

JUNCTION BOXES

*6 Junction Boxes for Center Fixtures.....	52800-B
2 Junction Boxes for Door Fixtures.....	52096

Note—For convenience in ordering, Fixture No. 19235 and Junction Box No. 52800 have been given Catalogue No. 19211 and take same suffix as corresponding Junction Box. Thus: Fixture No. 19235 with Junction Box No. 52800-B is No. 19211-B.

Note—Sectional diagrams of electric fixtures and junction boxes with instructions for ordering shown on pages 25, 27 and 29.

*If door fixtures are installed use one Junction Box No. 52800-C instead of No. 52800-B.

MAIL APARTMENT

FIXTURES

1 Bag Rack Fixture, including Reflector No. 51260, but less Junction Box and Electric Lamp.....	19205-C
1 Storage Fixture, including Reflector No. 18465, but less Junction Box and Electric Lamp.....	19295
2 Letter Case Fixtures, including Reflector No. 51270, but less Junction Box and Electric Lamp.....	19215-C
2 Door Fixtures, less Junction Boxes and Electric Lamp....	19136
5 Candle Brackets, complete, including Chimney, Candle, Wall Bracket and Flame spreader.....	282

JUNCTION BOXES

1 Junction Box for Bag Rack Fixture.....	51803-C
*1 Junction Box for Storage Fixture.....	52803-C
1 Junction Box for Letter Case Fixture.....	51808-B
1 Junction Box for Letter Case Fixture.....	51808-C
2 Junction Boxes for Door Fixtures.....	52096

*If door fixtures are installed use Junction Box No. 52803-B instead of No. 52803-C.

BAGGAGE APARTMENT

FIXTURES

6 Center Fixtures, less Junction Box and Electric Lamp....	19235
2 Door Fixtures, less Junction Box and Electric Lamp.....	19136

JUNCTION BOXES

*6 Junction Boxes for Center Fixtures.....	52800-B
2 Junction Boxes for Door Fixtures.....	52096

Note—For convenience in ordering, Fixture No. 19235 and Junction Box No. 52800 have been given Catalogue No. 19211 and take same suffix as corresponding Junction Box. Thus: Fixture No. 19235 with Junction Box No. 52800-B is No. 19211-B.

Note—Sectional diagrams of electric fixtures and junction boxes with instructions for ordering shown on pages 25, 27 and 29.

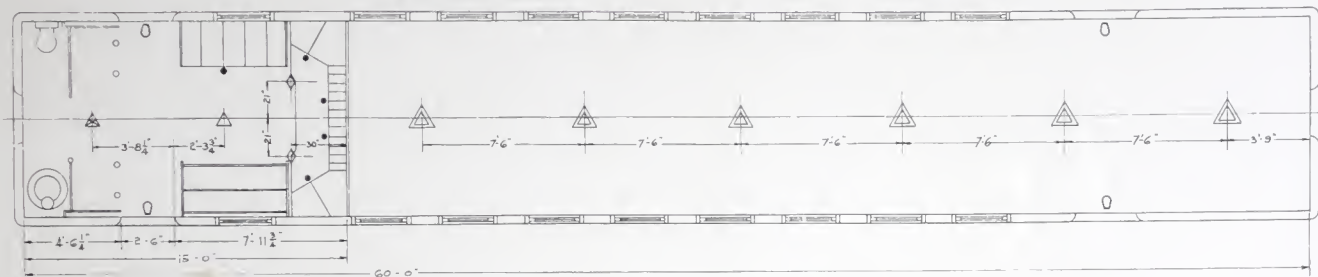
*If door fixtures are installed use one Junction Box No. 52800-C instead of No. 52800-B.

STANDARD 15 FT. MAIL APARTMENT

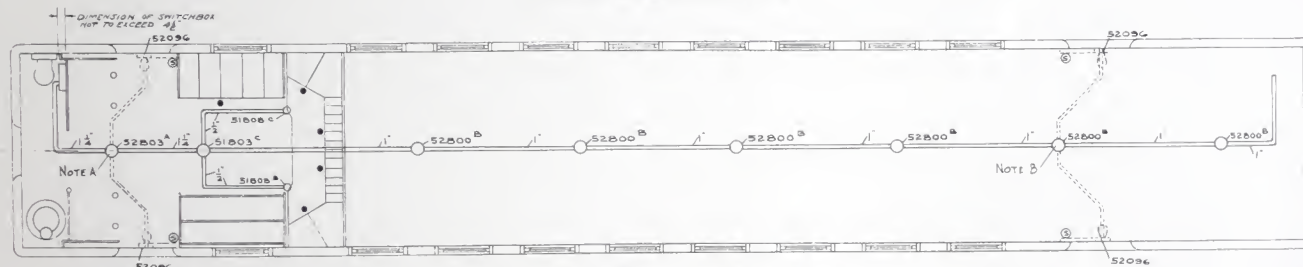
ELECTRIC LAMP

USING

500-600 LUMEN



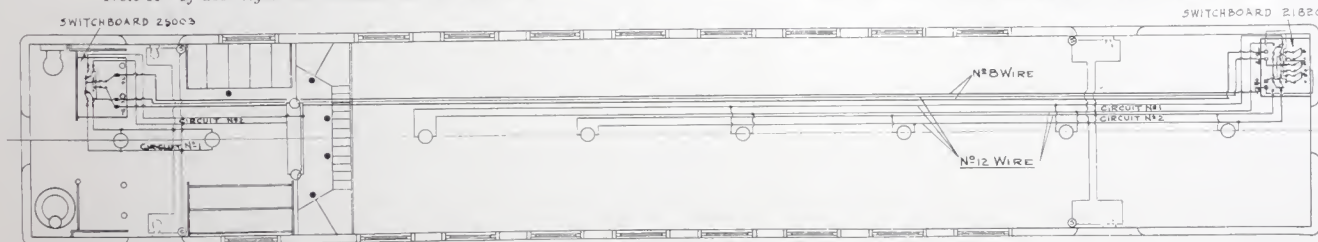
LIGHTING AND FIXTURE LAYOUT



CONDUIT AND JUNCTION BOX DIAGRAM

Note A—If door lights are installed use Box 52803-B

Note B—If door lights are installed use Box 52800-C



WIRING DIAGRAM

△ Indicates Fixture { 19205-E with G-30 } Bulb and Reflector No. 52160.
 { 19205-C with S-19 }

△ Indicates Fixture No. 19295 with { G-30 } Bulb.
 { S-19 }

△ Indicates Fixture No. 19235 with { G-30 } Bulb.
 { S-19 }

○ Indicates Fixture { 19215-E with G-30 } Bulb and Reflector No. 51270.
 { 19215-C with S-19 }

○ Indicates Fixture No. 19136 with S-19 Bulb.

• Indicates Candle Bracket No. 2832.

Note—225 ampere hour storage battery is required to fulfil reserve capacity specifications.

LIST OF FIXTURES AND JUNCTION BOXES

REQUIRED FOR ELECTRIC AND EMERGENCY CANDLE LIGHTING
15 FT. MAIL APARTMENT 45 FT. BAGGAGE APARTMENT

USING

225-275 LUMEN LAMP (S 17—TYPE B)

MAIL APARTMENT

FIXTURES

2	Bag Rack Fixtures, including Reflector No. 51260, but less Junction Box and Electric Lamp.....	19205-D
1	Storage Fixture, including Reflector No. 18465, but less Junction Box and Electric Lamp.....	19295
1	Letter Case Fixture, including Reflector No. 51270, but less Junction Box and Electric Lamp.....	19205-D
2	Letter Case Fixtures, including Reflector No. 51270, but less Junction Box and Electric Lamp.....	19215-D
2	Door Fixtures, less Junction Box and Electric Lamp.....	19136
5	Candle Brackets, complete, including Chimney, Candle, Wall Bracket and Flame spreader.....	282

JUNCTION BOXES

*2	Junction Boxes for Bag Rack Fixtures.....	51803-A
1	Junction Box for Bag Rack Fixture.....	51803-C
1	Junction Box for Storage Fixture.....	52803-A
2	Junction Boxes for Letter Case Fixtures.....	51808-K
2	Junction Boxes for Door Fixtures.....	52096

*If door fixtures are installed use one Junction Box No. 51803-B instead of No. 51803-A.

BAGGAGE APARTMENT

FIXTURES

9	Center Fixtures less Junction Box and Electric Lamp....	19235
2	Door Fixtures less Junction Box and Electric Lamp.....	19136

JUNCTION BOXES

*9	Junction Boxes for Center Fixtures.....	52800-B
2	Junction Boxes for Door Fixtures.....	52096

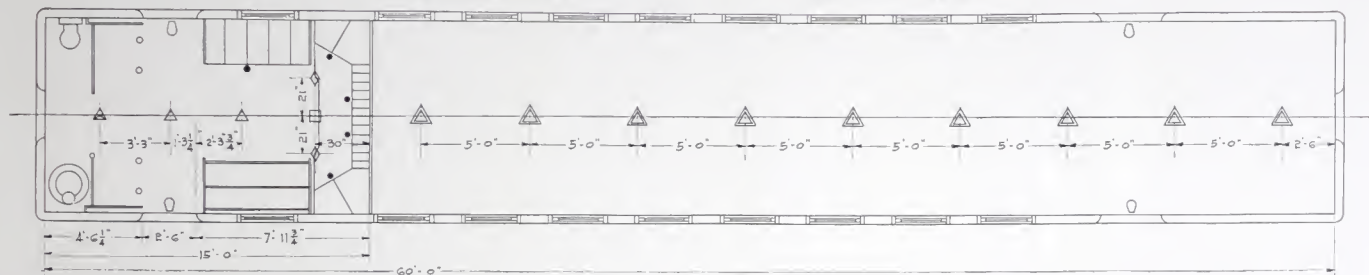
Note—For convenience in ordering, Fixture No. 19235, and Junction Box No. 52800 have been given Catalogue No. 19211, and take same suffix as corresponding Junction Box. Thus: Fixture No. 19235 with Junction Box No. 52800-B is 19211-B.

Note—Sectional diagrams of electric fixtures and junction boxes with instructions for ordering shown on pages 25, 27 and 29.

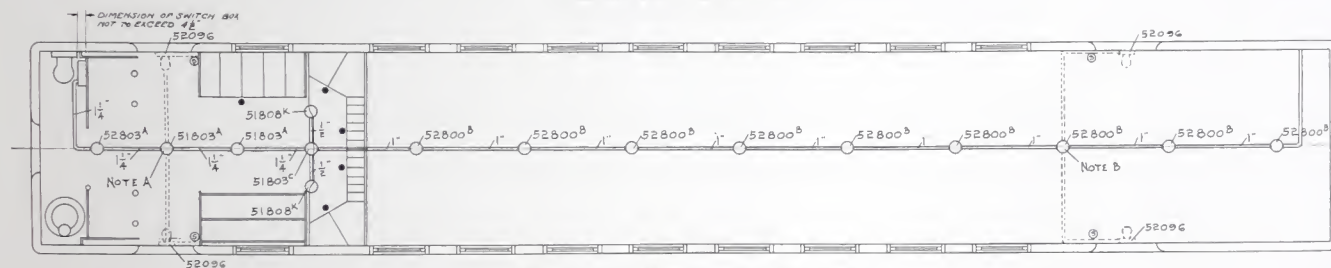
**If door fixtures are installed use one Junction Box No. 52800-C instead of No. 52800-B.*

STANDARD 15 FT. MAIL APARTMENT

USING
ELECTRIC LAMP 225-275 LUMEN



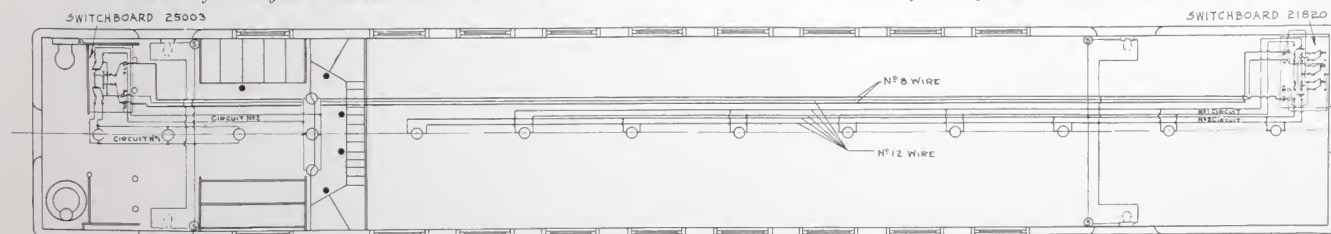
LIGHTING AND FIXTURE LAYOUT



CONDUIT AND JUNCTION BOX DIAGRAM

Note A—If door lights are installed use Box 51803-B

Note B—If door lights are installed use Box 52800-C



WIRING DIAGRAM

- △ Indicates Fixture 19205-D with S-17 Bulb and Reflector No. 51260.
- ▲ Indicates Fixture 19295 with S-17 Bulb.
- ▲ Indicates Fixture 19235 with S-17 Bulb.
- ◇ Indicates Fixture 19215-D with S-17 Bulb and Reflector No. 51270.

- Indicates Fixture 19205-D with S-19 Bulb and Reflector No. 51270.
- Indicates Fixture No. 19136 with S-17 Bulb.
- Indicates Candle Bracket No. 282.

Note—200 ampere hour storage battery is required to fulfil reserve capacity specifications.

LIST OF FIXTURES

REQUIRED FOR PINTSCH GAS AND EMERGENCY CANDLE LIGHTING

15 FT. MAIL APARTMENT 45 FT. BAGGAGE APARTMENT

850 LUMEN

MAIL APARTMENT

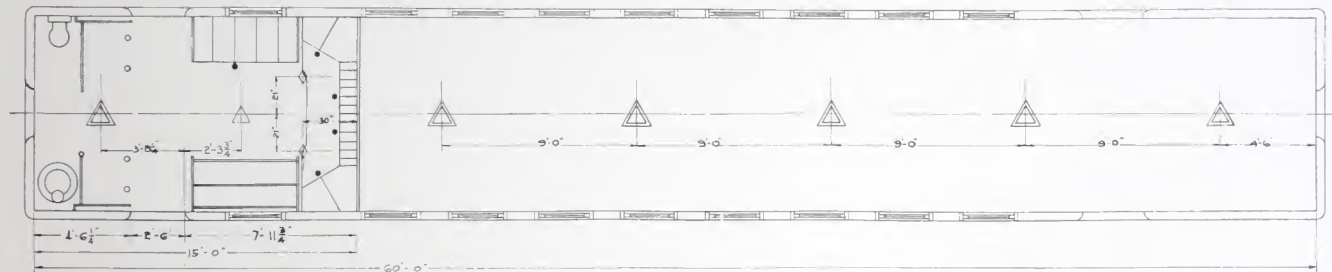
1	Bag Rack Fixture, with Reflector No. 51250.....	3520
1	Storage Fixture, with Reflector No. 52048.....	8511
2	Letter Case Fixtures, with Reflector No. 51252.....	8520
5	Candle Brackets, complete, including Chimney, Candle, Wall Bracket and Flame Spreader.....	282

BAGGAGE APARTMENT

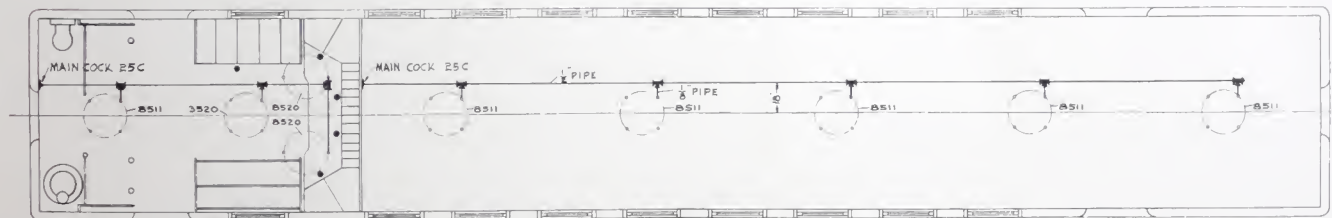
5	Center Fixtures, with Reflector No. 52048.....	8511
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Note—Sectional diagrams of Pintsch Gas Fixtures with instructions for ordering shown on pages 31, 33 and 35.

STANDARD 15 FT. MAIL APARTMENT
USING
PINTSCH GAS MANTLE 850 LUMEN



LIGHTING AND FIXTURE LAYOUT



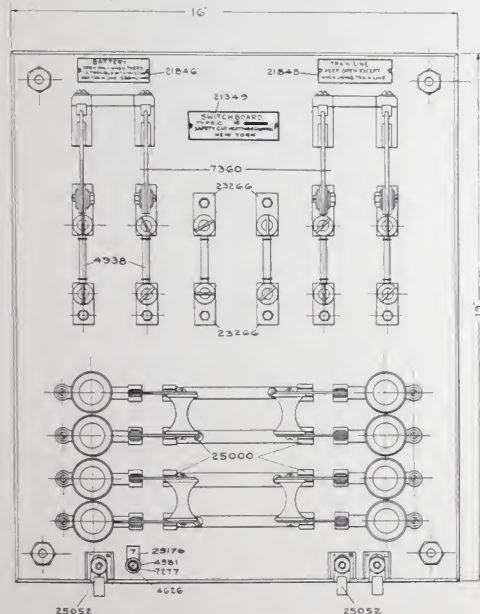
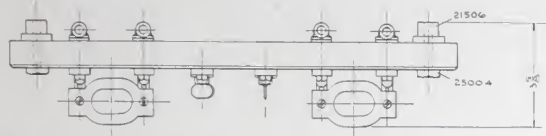
PIPING DIAGRAM

△ Indicates Fixture No. 3520 with Reflector No. 51250.
● Indicates Fixture No. 8511 with Reflector No. 52048.

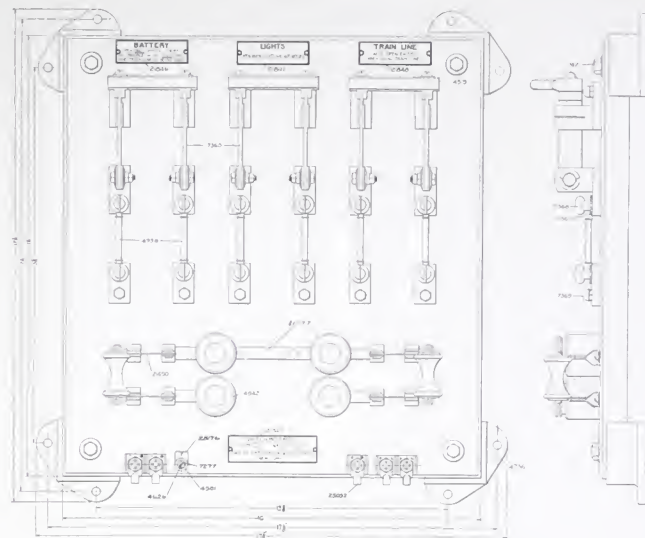
○ Indicates Fixture No. 8520 with Reflector No. 51252.
• Indicates Candle Bracket No. 282.

Note—2 Gas Holders, No. 250; or 3 Gas Holders, No. 249, required for specified capacity.

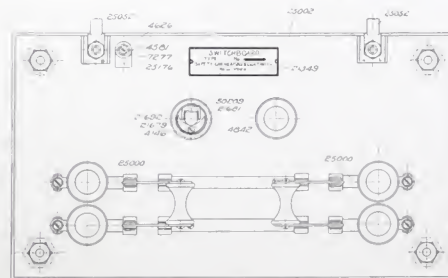
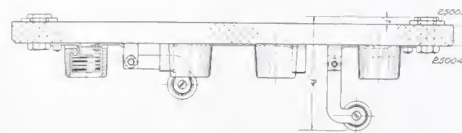




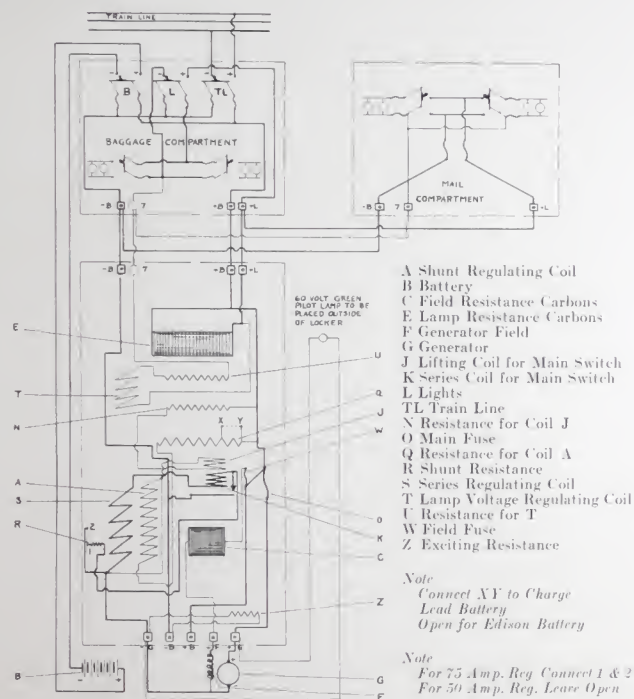
SWITCHBOARD No. 25019 FOR 60 FT. AND 70 FT. MAIL CARS.



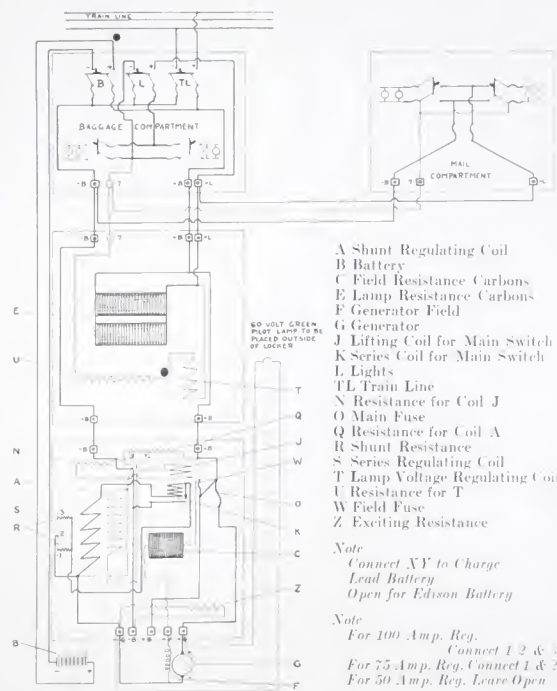
BAGGAGE COMPARTMENT SWITCHBOARD No. 21820.



MAIL COMPARTMENT SWITCHBOARD No. 25003



WIRING DIAGRAM FFG REGULATOR.
BAGGAGE AND MAIL COMPARTMENT SWITCH PANELS.



WIRING DIAGRAM FF GENERATOR REGULATOR.
F AND G LAMP REGULATOR. BAGGAGE AND MAIL COMPARTMENT SWITCH PANELS.





